

The Relationship Between Instagram Photo Activity and Body Dissatisfaction in Emerging Adult Women Mediated by Sociocultural Attitudes

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Abstract. Body dissatisfaction is a problem experienced by emerging adult women from various cultures, including those from Asia. The ease of accessing photo-based platforms like Instagram, and sociocultural attitudes may worsen the body image of social media users. Instagram posts can reflect ideal standards that are difficult to attain and the internal or external pressure on women to meet them. This study aimed to measure the role of sociocultural attitudes, i.e., internalization of beauty standards and social pressure, as a mediator of the relationship between Instagram photo activity and body dissatisfaction of women in emerging adulthood. This research involved 311 ($M_{age}=21.6$, $SD=1.87$) female Instagram users, aged 18 to 24. This quantitative research used survey as the data collection method and regression with a mediation model for data analysis. Results showed that sociocultural attitudes have a positive role in the relationship between Instagram photo activity and the body dissatisfaction of adult female Instagram users. Future research can incorporate different participant groups and explore alternative models to measure the variables in this study.

Keywords: body dissatisfaction; Instagram use; internalization; social pressure

In the 21st century, body image issues have spread and become a global phenomenon, especially in Asia (Kim & Aubrey, 2015; Lee et al., 2014). Body dissatisfaction can be defined as negative feelings and thoughts that someone has about their own physique (Cash & Szymanski, 1995). It can also be interpreted as a mismatch between an individual's ideal body perception and their perception of their actual body (Niide et al., 2011; Showers & Larson, 1999).

The global body dissatisfaction epidemic is also caused by the difficulty of women of different ethnicities to follow the idealized standards of beauty originating from Western culture (Frederick et al., 2016; Swami et al., 2010). This is also the case for women in Indonesia, where they desire facial features influenced by both Indonesian and Western standards, such as a sharp nose and slender cheeks (Utami et al., 2021). This discrepancy between distinctive body features and the ideal standard of beauty leads to cultural conflict, where women begin to desire a standard that is challenging to attain.

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Body dissatisfaction typically emerges in adolescence and continues to develop until emerging adulthood, or around age 18 to 24. At this age, women tend to desire a thin body and have a physical self-concept that makes them more concerned with their appearance (Aparicio-Martinez et al., 2019). Women at this age also spend a lot of time socializing with peers, which makes them feel pressured to meet certain ideal standards and tend to want to appear attractive in a competitive sense (Sari et al., 2022).

One approach, the tripartite model, explains that three channels influence a person's body image, namely parents, peers, and media. One of the most popular media today is social media Instagram, which is primarily used to upload photos (Grogan, 2017). In Indonesia, about 38% of Instagram users are emerging adults, with 51% of them being women (NapoleonCat, 2022). Previous studies have shown that Instagram use in general is positively associated with users' body dissatisfaction (Cramer & Inkster, 2017; Sharp & Gerrard, 2022; Vandenbosch et al., 2022). This is due to users' tendency to compare their look with others, with many people posting edited photos to present their idealized versions (Duan et al., 2022). This also illustrates that the nature of Instagram itself can present all three social agents on a single platform.

Nonetheless, some other studies indicate that there is no significant association between Instagram use in general and body dissatisfaction. Instagram use associated with exposure to appearance-related activities, e.g., fitspiration, investment in likes, celebrity content, fashion, and beauty, was not found to be associated with users' body dissatisfaction (Brown & Tiggemann, 2016; Cohen et al., 2017; Fardouly et al., 2018; Tiggemann et al., 2018). However, previous research found that exposure derived from Instagram photo activity has a positive relationship with body dissatisfaction (Linawati, 2020).

Variations in the results of previous studies may be attributed to individual differences, with some individuals being less affected by the exposure to Instagram content, while others are more sensitive to it. Social theories, such as the dual pathway model, explain that the combination of social pressures to be thin and the internalization of beauty standards can cause body image issues and eating disorders (Gramaglia et al., 2018).

This is consistent with the social perspective on body image issues and body dissatisfaction. The sociocultural model explains that (1) there is an ideal standard of beauty in society that (2) is spread through various social agents and (3) the ideal standard is internalized by individuals, so that (4) satisfaction or dissatisfaction with appearance will be the result of personal evaluation (Cash & Smolak, 2011). Thus, this study aimed to underline two key factors related to body dissatisfaction, namely the role of the media as a social agent and the environment and culture (i.e., family and peers) that shape certain sociocultural attitudes regarding appearance.

Previous studies found that the relationship between Instagram use and body anxiety may be mediated by sociocultural attitudes, e.g., internalization of beauty ideals and social pressure, that can differ between individuals (Cohen et al., 2017; Fardouly et al., 2018; Verrastro et al., 2020). Eating disorders or body dissatisfaction caused by Instagram use are also mediated by the internalization of ideal beauty standards, such as the idea of being thin (Aparicio-Martinez et al., 2019; Duan et al.,

2022). Meanwhile, a study done in Batam, Indonesia, found that social pressure is a factor causing body dissatisfaction among women (Sari et al., 2022).

People in collectivist environments, such as East Asian societies, are more prone to internalize ideal standards and feel pressured to meet these norms than people from other cultures (Kim & Aubrey, 2015; Stojcic et al., 2020). The social pressure to meet ideal beauty standards and the internalization of those standards may be predictors or mediators between Instagram use and body dissatisfaction in emerging female adults.

Based on the above explanation, the issue problem of body image is closely connected to the use of social media platforms, such as Instagram. Exposure to content containing beauty messages is considered to have adverse effects on people in a collectivist environment, where they become more sensitive to such content and feel pressured to meet popular beauty standards in their environment. Furthermore, previous studies found that women retain higher levels of body dissatisfaction than men. These levels of dissatisfaction also tend to persist with age, which may affect their mental health (Sari et al., 2022). In addition, research on body image and Instagram use in emerging adulthood is still rare. Existing studies usually involve female adolescents as their research samples.

Thus, this study intended to examine the sociocultural attitudes that may contribute to the emergence of body dissatisfaction due to Instagram use in emerging female adults in Indonesia. This study can shed light on the development of body image in collectivist environments like Indonesia. This study also attempted to fulfill the recommendations of previous research, where body image issues need to be explored in different age groups, ethnicities tribes, and cultures (Sharp & Gerrard, 2022; Vandebosch et al., 2022).

This study posited that Instagram exposure stemming from general Instagram photo activity is not directly related to body dissatisfaction among women in emerging adulthood. Differences in individual backgrounds, such as in interpersonal and intrapersonal aspects, may be a variable influencing how individuals respond to messages containing ideal beauty standards. The variation can be influenced by individual sociocultural attitudes, namely: (1) internalization of beauty standards, which describes the extent to which individuals accept and are affected by these ideal standards; and (2) pressure, which describes the extent to which environments pressure individuals to achieve these ideal standards.

Based on the explanation above, this study hypothesized that sociocultural attitudes have a mediating role in the relationship between Instagram photo activity and body dissatisfaction of women in emerging adulthood. Furthermore, this study proposed the following secondary hypotheses: 1) Internalization is a significant mediator in the relationship between Instagram activity and body dissatisfaction of female Instagram users who are in emerging adulthood; 2) Social pressure is a significant mediator in the relationship between Instagram activity and body dissatisfaction of female Instagram users who are in emerging adulthood.

Methods

This study employed a quantitative method, using survey as its data collection method. The adapted measurement tool used in the study received ethical clearance from the Ethics Committee of the Faculty of Psychology, Universitas Gadjah Mada (UGM). Participant recruitment was conducted online using a convenience sampling technique. Recruitment posters, which included a Google Form link to the questionnaire, were distributed via social media platforms such as Instagram, Twitter, and WhatsApp. Participants were required to give their informed consent, which was presented on the first page of the questionnaire, before participating in the study.

Recruitment was conducted over a two-month period, resulting in a sufficient dataset comprising 312 participants. The final sample consisted of 311 women (M age = 21.6, SD = 1.87), after excluding one dataset due to the participant selecting the lowest possible value (0 or 1) for all items. The participants in this study were women aged between 18 and 24 who reported Instagram use. Of the participants, 55.31% (n = 117) were Javanese, 18.97% (n = 59) were Sundanese, and the remainder belonged to other ethnic groups, e.g., Chinese, Malay, Minangkabau, Batak, Sulawesi, and others. In terms of occupation, 76.1% (n = 237) were students, 14.15% (n = 44) were private employees, and the remaining were civil servants, freelance workers, or unemployed.

Regarding Instagram usage, 33.44% (n = 104) of participants used Instagram for 1 to 2 hours daily, 31.83% (n = 99) used it for more than 2 hours per day, and the remaining participants used Instagram for less than 1 hour per day. This study used instruments translated from English into Indonesian. Instagram photo activity was measured using the Instagram Photo Activity Questionnaire developed by Hendrickse et al. (2017). The researcher did not conduct a pilot test of this instrument due to the similarity of the research participants, the consistency of Instagram features, and the strong reliability reported in the 2020 trial (Table 1). Therefore, the questionnaire was considered still relevant for reuse (Creswell & Creswell, 2018). This questionnaire uses a 5-point Likert scale ranging from 1 (Almost never) to 5 (Every time I log in).

This questionnaire aims to measure users' exposure while engaging in activities involving photo or video content. The exposure is categorized into two types: passive and interactive. Passive exposure refers to Instagram use that resembles traditional media exposure, involving only viewing photos or videos. A sample item for this type of exposure is: "Looking at friends' photos (or videos)." Conversely, interactive exposure involves user activities that include interaction with others on Instagram, resulting in more intense and prolonged exposure. A sample item for this type of exposure is: "Commenting on someone else's photo (or video)."

The Body Dissatisfaction Scale for Women measures women's dissatisfaction with various body areas. This scale includes three dimensions: 1) body shape & weight, which is related to dissatisfaction with overall body shape and weight, as well as specific body areas; 2) skeletal structure, which is related to dissatisfaction with the size and shape of body parts that are visible to others; and 3) facial features, which is related to dissatisfaction with facial parts and features that are easily observed directly (Tariq & Ijaz, 2015). This scale also uses a 5-point Likert scale, with response options ranging

from 0 (Never) to 4 (Always).

Then, sociocultural attitudes were measured using Schaefer et al. (2016)'s Sociocultural Attitudes Towards Appearance Questionnaire-4-Revised (SATAQ-4R). The pilot test of this scale involved 100 participants in 2023. This scale aims to measure sociocultural attitudes, namely the extent to which women internalize ideal standards of beauty and feel pressure from their sociocultural environment. SATAQ-4R has two dimensions: (1) internalization, which is used to measure the internalization of ideal beauty standards and has three related aspects, namely thin low body fat, muscular, and general attractiveness; and (2) pressure, which is used to measure women's perceived pressure to meet their ideal beauty standards and includes four aspects, namely family, peers, significant others, and media. It uses a 5-point Likert scale with options ranging from 1 (Very unsuitable) to 5 (Very suitable).

Table 1

Reliability Test Results on Instrument

	<i>N</i>	Cronbach's α
IPA	6	0.646
BDS-W	26	0.909
SATAQ-4R	31	0.900

IPA = Instagram Photo Activity; BDS-W = Body Dissatisfaction Scale for Women; SATAQ-R = Sociocultural Attitudes Towards Appearance Questionnaire-4-Revised

The assumption tests used in this study were normality and correlation matrix tests. Subsequently, the data analysis employed in this study was regression analysis with a mediator (simple mediator). The mediating variable is a variable that mediates the relationship between independent and dependent variables (Urbayatun & Widhiarso, 2012). The assumption tests and regression analysis were conducted using JAMOV version 2.2.3.

Results

This study included 311 paired data points, consisting of the following variables: (1) Instagram photo activity as the independent variable (X), (2) sociocultural attitudes as the mediator (M), and (3) body dissatisfaction as the dependent variable (Y). Table 2 shows the descriptive statistics for the variables involved in the study: (1) Instagram photo activity ($m=20$; $SD=4.23$); (2) sociocultural attitudes ($M=74$; $SD=20.8$), (3) internalization ($M=31.4$; $SD=5.60$); (4) social pressure ($M=42.5$; $SD=16.8$); and (5) body dissatisfaction ($M=48.4$; $SD=19.2$). See Table 2

Table 2

Descriptive Statistics

	N	Mean	Minimum	Maximum	SD
IPA	311	20	8	30	4.23
SA	311	74	28	118	20.8
Inter	311	31.4	12	43	5.60
SP	311	42.5	16	79	16.8
BD	311	48.4	8	100	19.2

IPA = Instagram Photo Activity, SA = Sociocultural Attitudes, Inter = Internalization, SP = Social Pressure, BD = Body Dissatisfaction

The intercorrelation matrix (Table 3) shows that Instagram usage activity is significantly positively related to both sociocultural attitudes and body dissatisfaction. Sociocultural attitudes also show a significant positive relationship with body dissatisfaction. Instagram photo activity is significantly positively related to the dimensions of sociocultural attitudes, namely internalization and social pressure. Internalization has a significant positive relationship with body dissatisfaction, as does social pressure. The strongest correlation was found in the relationship between social pressure and body dissatisfaction ($r = 0.717$). Meanwhile, the weakest correlation coefficient was observed in the relationship between Instagram usage activity and body dissatisfaction ($r = 0.292$).

Table 3

Intercorrelation Matrix

	M	SD	1	2	3	4
IPA	20.0	4.23	-			
SA	74.0	20.8	0.437***	-		
Inter	31.4	5.60	0.355***	-	-	
SP	42.5	16.8	0.422***	-	-	-
BD	48.4	19.2	0.292***	0.703***	0.456***	0.717***

IPA = Instagram Photo Activity, SA = Sociocultural Attitudes, Inter = Internalization, SP = Social Pressure, BD = Body Dissatisfaction

This study aimed to examine the role of sociocultural attitudes in the relationship between Instagram photo activity and body dissatisfaction. This analysis was conducted using regression tests with a mediator, employing the bootstrapping technique with 1,000 resamples. Based on the results of this analysis, the indirect effect of Instagram photo activity on body dissatisfaction through sociocultural attitudes shows a significant value ($B=1.4099$; $p<0.01$), which accounts for 94.47% of the total effect of Instagram photo activity on body dissatisfaction (Table 4). Thus, sociocultural attitudes act as a mediator in the relationship between Instagram photo activity and body dissatisfaction among emerging adult women. This mediating relationship is also positive, indicating that the higher the Instagram photo activity, the higher the body dissatisfaction due to the increased sociocultural attitudes perceived by the users.

However, the study found no significant direct effect between Instagram photo activity and body dissatisfaction ($B=-0.0825$; $p=0.742$, $p>0.05$). This indicates that Instagram photo activity can no longer predict body dissatisfaction when sociocultural attitudes are included in the calculation. Therefore, the first hypothesis in this study is accepted.

Table 4

Regression Analysis with Sociocultural Attitudes as Mediator

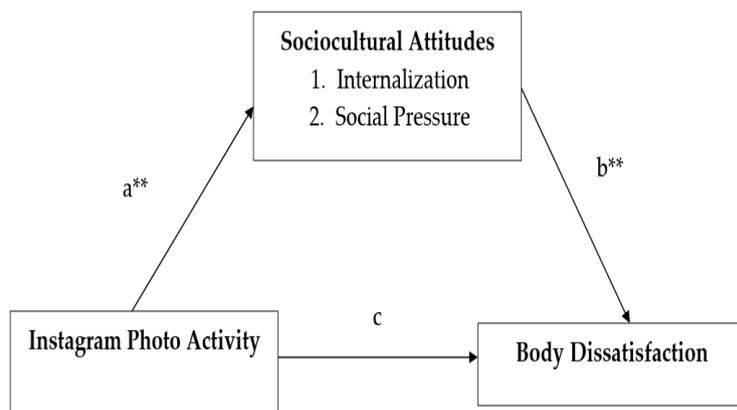
Effect	B	SE	95% CI		Z	p
			LLCI	ULCI		
Indirect	1.4099	0.225	0.997	1.837	6.272	<0.001
Direct	-0.0825	0.250	-0.561	0.419	-0.330	0.742
Total	1.3273	0.275	0.747	1.854	4.824	<0.001

X = Instagram Photo Activity, M = Sociocultural Attitudes, Y = Body Dissatisfaction

The role of sociocultural attitudes in the relationship between Instagram photo activity and body dissatisfaction is described as full mediation (Figure 1), meaning that the relationship between the two variables can be explained through the mediator’s role, and the direct effect of the two variables is no longer significant. The total effect of the relationship between Instagram photo activity and body dissatisfaction, mediated by sociocultural attitudes, shows a significant value ($B=1.3273$, $p<0.01$).

Figure 1

Mediation Pathway of Instagram Photo Activity, Sociocultural Activity, and Body Dissatisfaction



Note: ** indicates a significant relationship at $p < 0.01$. The figure shows path a ($p=0.0000$; $B=2.1477$), path b ($p=0.0000$; $B=0.6564$), and path c ($p=0.7246$, $B=-0.0825$).

This study also separately examined the mediating role of the dimensions of sociocultural attitudes, namely internalization and social pressure, in the relationship between Instagram photo activity and body dissatisfaction. The first analysis was conducted to measure the role of internalization in the relationship between Instagram photo activity and body dissatisfaction among emerging adult women

who used Instagram. The study hypothesized that internalization is a significant mediator in the relationship between Instagram photo activity and body dissatisfaction.

The indirect effect analysis showed that internalization plays a significant role in the relationship between Instagram photo activity and body dissatisfaction ($p < 0.01$, $B = 0.649$), accounting for 48.9% of the total effect of Instagram photo activity on body dissatisfaction (Table 5). This mediating relationship is also positive, indicating that the higher the Instagram photo activity, the higher the body dissatisfaction due to the increased internalization of beauty perceived by the users.

Thus, internalization acts as a mediator in the relationship between Instagram photo activity and body dissatisfaction among emerging adult women. The direct effect was also found to be significant ($p = 0.011$; $B = 0.679$), accounting for 51.1% of the total effect of Instagram photo activity on body dissatisfaction. Therefore, the second hypothesis in this study is accepted.

Table 5

Regression Analysis with Internalization as Mediator

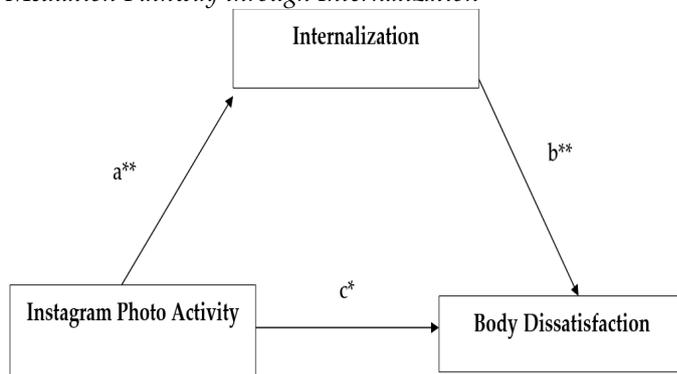
Effect	B	SE	95% CI		Z	p
			LLCI	ULCI		
Indirect	0.649	0.157	0.374	0.986	4.14	<0.001
Direct	0.679	0.267	0.139	1.166	2.54	0.011
Total	1.327	0.270	0.778	1.86	4.92	<0.001

X = Instagram Photo Activity, M = Internalization, Y = Body Dissatisfaction

These results indicate that the level of Instagram photo activity can actually predict the level of body dissatisfaction among participants without being mediated by internalization (Figure 2). Thus, the mediation model can be described as partial mediation, meaning that the relationship between the two variables is only partially explained by the mediator. The total effect of the relationship between Instagram photo activity and body dissatisfaction, mediated by internalization, shows a significant value ($p < 0.01$, $B = 1.327$).

Figure 2

Mediation Pathway through Internalization



Note: ** indicates a significant relationship at $p < 0.01$; while * indicates a significant relationship at $p < 0.05$. The figure shows path a ($p = 0.0000$; $B = 0.469$), path b ($p = 0.0000$; $B = 1.383$), and path c ($p = 0.011$, $B = 0.679$).

The second additional analysis measured the role of social pressure in the relationship between Instagram photo activity and body dissatisfaction. The study hypothesized that pressure is a significant mediator in the relationship between Instagram photo activity and body dissatisfaction among emerging adult women who used Instagram.

Based on the indirect effect analysis, social pressure plays a significant role as a mediator in the relationship between Instagram photo activity and body dissatisfaction ($p < 0.01$, $B = 1.3865$), which accounts for 95.91% of the total effect of Instagram photo activity on body dissatisfaction (Table 6). This indicates that social pressure acts as a mediator in the relationship between Instagram photo activity and body dissatisfaction among emerging adult women. Meanwhile, the direct analysis found that Instagram photo activity does not significantly influence body dissatisfaction directly ($p = 0.797$, $p > 0.05$; $B = -0.0591$). Therefore, the third hypothesis in this study is accepted.

This mediating relationship is also positive, indicating that the higher the Instagram photo activity, the higher the body dissatisfaction due to the increased social pressure perceived by the users.

Table 6

Regression Analysis with Social Pressure as Mediator

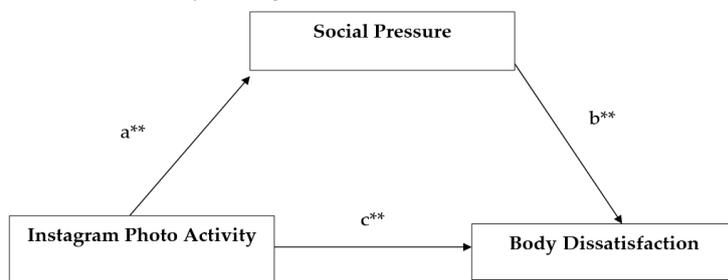
Effect	B	SE	95% CI		Z	p
			LLCI	ULCI		
Indirect	1.3865	0.195	0.996	1.769	7.114	<0.001
Direct	-0.0591	0.230	-0.506	0.401	-0.257	0.797
Total	1.327	0.274	0.819	1.877	4.847	<0.001

X = Instagram Photo Activity, M = Social Pressure, Y = Body Dissatisfaction

Thus, this mediation model can be described as full mediation, where changes in the level of body dissatisfaction predicted by Instagram photo activity can be explained through social pressure as a mediator (Figure 3). The total effect of the relationship between Instagram photo activity and body dissatisfaction, mediated by social pressure, shows a significant value ($p < 0.01$, $B = 1.3273$).

Figure 3

Mediation Pathway through Social Pressure



Note: ** indicates a significant relationship at $p < 0.01$. The figure shows path a ($p = 0.0000$; $B = 1.6786$), path b ($p = 0.0000$; $B = 0.8260$), and path c ($p = 0.797$, $B = -0.0591$).

The study concluded that (1) sociocultural attitudes, namely internalization and social pressure, play a significant role in the relationship between Instagram photo activity and body dissatisfaction. Furthermore, (2) in separate analyses, social pressure has a greater role compared to internalization when acting as a mediator in the relationship between Instagram photo activity and body dissatisfaction. Nevertheless, social pressure within sociocultural attitudes and social pressure itself have a very strong influence on the relationship between Instagram usage and dissatisfaction. This makes the direct relationship between these two dimensions negative.

Discussion

This study aimed to examine the role of sociocultural attitudes in the relationship between Instagram photo activity and body dissatisfaction among female Instagram users aged 18 to 24. The results show that the indirect effect of Instagram photo activity on body dissatisfaction through sociocultural attitudes is significant. Furthermore, the direct effect between Instagram photo activity and body dissatisfaction becomes insignificant. Based on the findings of this study, sociocultural attitudes act as a mediator in explaining the relationship between Instagram photo activity and body dissatisfaction. The form of mediation provided by sociocultural attitudes in the relationship between Instagram photo activity and body dissatisfaction is full mediation. Therefore, the main hypothesis of this study is accepted.

These findings are supported by previous studies, which found that the internalization of a thin body as an ideal body type and the pressure to be thin have the greatest effect on body image issues (Cafri et al., 2005; Stojcic et al., 2020). Other results also showed that exposure caused by Instagram photo activity does not directly contribute to body dissatisfaction. These results are similar to previous studies and underscore that not all individuals or Instagram users are sensitive to messages containing ideal beauty standards (Brown & Tiggemann, 2016; Cohen et al., 2017; Fardouly et al., 2018).

These findings also support social theories regarding body image, such as the dual pathway model (Stice, 1994) for women living in a collectivist environment, which posits that women living in such cultures also feel the pressure and internalization of certain beauty standards, leading to body dissatisfaction. Furthermore, these findings also show that sociocultural models, such as the tripartite model (van den Berg et al., 2002), are also suitable for Indonesian women, for whom family, peers, significant others, and media are influential in creating pressure and internalization of beauty standards in society. This finding shows how the sociocultural factor is important in shaping body image for Indonesian women.

This study also reaffirms that social media platforms like Instagram, which is a photo-based social media platform, can potentially cause body dissatisfaction among its users. This platform contains visual content like photos that have been edited by their posters to match existing ideal beauty standards (Duan et al., 2022). Then, users can compare themselves to others, e.g., peers, celebrities, or family members, using these edited photos as guidance for ideal beauty standards, assessing them based on the number of likes or comments received (Brown & Tiggemann, 2016; Chua & Chang, 2016;

Cohen et al., 2017; Fardouly et al., 2018; Tiggemann et al., 2018). As a result of this exposure, individuals may internalize certain beauty standards and feel pressured to meet them. Thus, Instagram has become a new medium for spreading ideal beauty standards.

This study also attempted to separately measure the dimensions of sociocultural attitudes, i.e., internalization and social pressure, as mediators in the relationship between Instagram photo activity and body dissatisfaction. This analysis shows that internalization acts as a mediator in the relationship between Instagram photo activity and body dissatisfaction. Based on the pathway, exposure from Instagram photo activity can predict the level of internalization among emerging adult women, which is consistent with the findings of Duan et al. (2022). Furthermore, the internalization of ideal beauty standards can create body dissatisfaction or worsen the body image of its users (Aparicio-Martinez et al., 2019)).

However, this model shows that the role of internalization in the relationship between Instagram photo activity is partial, meaning that only a significant portion of the relationship between the two variables is mediated by internalization. Meanwhile, Instagram photo activity itself can still directly predict the level of body dissatisfaction among emerging adult women, making the roles of internalization and Instagram photo activity equally strong. Other findings also state that Instagram use in general can shape ideal beauty standards for women from collectivist environments, although the internalization of ideal beauty standards will differ from one individual to another (Gahler et al., 2023). This may apply to this study, whereas the participants might have different ideal beauty standards, while the measurement used only depicts specific ideal beauty standards that may not be idolized by the participants. Furthermore, participants who idolized ideal beauty standards that align with the measurement would experience this internalization, leading to body dissatisfaction. This explains why Instagram photo activity and internalization are equally strong predictors of participants' body dissatisfaction.

Other findings indicate that users who follow celebrities, fitspiration content, and beauty-themed content experience higher body dissatisfaction (Seekis et al., 2020; Utami et al., 2021). In this case, users may form ideal beauty standards based on likes and comments received by those users for their posts, considering those interactions as validation tools (Chua & Chang, 2016; Seekis et al., 2020). Thus, the women participating in this study are likely exposed to content with beauty standard messages according to their respective criteria and may consider the number of likes on others' posts as imperative and as a validation tool.

Another finding also indicates that the relationship between Instagram use and body dissatisfaction is depicted through appearance-related comparison and then internalization (Piccoli et al., 2021). This result is supported by previous research revealing that internalization usually co-occurs with the tendency for social comparison (Schaefer et al., 2021). This finding may further explain a more comprehensive model that includes appearance comparison, whether with celebrities, peers, or fitspiration content, as found in previous studies (Chua & Chang, 2016; Fardouly et al., 2018; Seekis et al., 2020). However, it should be noted that the direct role of Instagram photo activity in body dissatisfaction is only significant in this model, where internalization partially accounts for body

dissatisfaction.

Furthermore, the second additional analysis showed that social pressure mediates the relationship between Instagram photo activity and body dissatisfaction among emerging adult women who used Instagram. This pressure comes from family, peers, media, and significant others. This finding is similar to previous research, which states that the dimension of social pressure has a positive relationship with body dissatisfaction among emerging adult women in Batam (Sari et al., 2022). This pressure can arise from media depicting the thin-ideal standard with Caucasian features in magazines, TV, and films, which then becomes the desired beauty standard. A qualitative study also found that social pressure (e.g., sarcasm, teasing, and fat-talk) pushes women to diet and even develop eating disorders (Utami et al., 2021). This finding is also supported by another study, which showed that emerging adult women in Malaysia feel social pressure from peers. This is because collectivist culture tends to make individuals conform to societal standards regarding the ideal thin body image and body dissatisfaction (Zhang et al., 2018) as cite in Shagar et al. (2021).

Based on the research findings, (1) internalization and social pressure play roles in the relationship between Instagram photo activity and body dissatisfaction, and (2) social pressure has a more significant role compared to internalization in explaining the relationship between Instagram photo activity and body dissatisfaction. This result contrasts with a study involving Chinese women, where thin-internalization is the strongest predictor of body dissatisfaction compared to social pressure from family, peers, and media (Stojcic et al., 2020). However, this result aligns with the concept of relational collectivism, which states that an individual's identity is formed based on relationships with group members and inter-member attachment (Lewis & Neighbors, 2004).

This study highlights the phenomenon of body dissatisfaction among emerging adult women. This focus is due to reports that women experience higher levels of dissatisfaction compared to men (Karazsia et al., 2017; Keski-Rahkonen & Mustelin, 2016). This is because women evaluate their bodies differently and engage in fat-talk more frequently (Voges et al., 2019). On the other hand, men tend to have a more positive body image and actively use it as motivation to pursue their ideal standards (Mahon & Hevey, 2021).

The findings of this study are beneficial for both practitioners and future researchers. These results will help practitioners understand the causes of body image issues among women in emerging adulthood in collectivist environments, such as Indonesia. Practitioners can then provide interventions related to the internalization of ideal beauty standards and attitudes in facing social pressure from their social environments and the media by promoting body positivity. This study will also be useful for Instagram users, especially women in emerging adulthood, who are at risk of experiencing body dissatisfaction. Users can reduce and manage screen time and start filtering content that promotes certain ideal beauty standards using the mute feature and adjust suggestions, and also avoid following appearance-related content or accounts. Furthermore, users can utilize Instagram's new feature to hide the number of likes, creating a healthier and more supportive social media environment.

This study has several limitations. The first limitation was its measurement, which used self-report surveys that might lead to social desirability and individual biases. Second, the researchers

proposed that the sociocultural attitude measurement did not adequately represent beauty standards in Indonesia. Therefore, its relationship with dissatisfaction had not been well depicted. Nevertheless, this study was able to provide an overview of the relationship between Instagram photo activity and body dissatisfaction with the mediation of sociocultural attitudes in the context of emerging adult women in Indonesia.

Conclusion

This study aimed to investigate the role of sociocultural attitudes in the relationship between Instagram photo activity and body dissatisfaction among emerging adult female Instagram users. Indirect effect analysis found that sociocultural attitudes act as a mediator in the relationship between Instagram photo activity and body dissatisfaction. Furthermore, the direct effect of Instagram photo activity and body dissatisfaction becomes insignificant after controlling for sociocultural attitudes. Thus, it can be concluded that the form of mediation is full mediation.

Additionally, the present study also found that the relationship between Instagram photo activity and body dissatisfaction can be mediated by social pressure, where the form of mediation is full mediation. This study also shows that the internalization of beauty standards can mediate the relationship between Instagram photo activity and body dissatisfaction. However, this form of mediation is partial mediation, where both the indirect and direct effects show significant scores.

Recommendation

Based on this study, future researchers can conduct exploratory tests on the model of the relationship between the three variables in this study and related factors to develop a more comprehensive model in the Indonesian context. Furthermore, researchers can incorporate distractor items to mitigate participant bias. Future research can be carried out on different groups, such as men or other age groups.

Declaration

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Author's Contributions

BL conceptualized the study, conducted statistical analysis, and drafted the manuscript. AFH provided conceptual guidance and critical input throughout the research process. All authors have reviewed and approved the final manuscript.

Conflict of Interest

The authors declare no conflict of interest related to this study.

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References

- Aparicio-Martinez, P., Perea-Moreno, A., Martinez-Jiminez, M., Redel-Macias, M., Pagliari, C., & Vaquero-Abellan, M. (2019). Social media, thin-ideal, body dissatisfaction and disordered eating attitudes: An exploratory analysis. *International Journal of Environmental Research and Public Health*, 16, 4177. <https://doi.org/10.3390/ijerph16214177>
- Brown, Z., & Tiggemann, M. (2016). Attractive celebrity and peer images on Instagram: Effect on women's mood and body image. *Body Image*, 19, 37–43. <https://doi.org/10.1016/j.bodyim.2016.08.007>
- Cafri, G., Yamamiya, Y., Brannick, M., & Thompson, J. K. (2005). The influence of sociocultural factors on body image: A meta-analysis. *Clinical Psychology: Science and Practice*, 12(4), 421–433. <https://doi.org/10.1093/clipsy.bpi053>
- Cash, T. F., & Smolak, L. (2011). *Body image: A handbook of science, practice, and prevention* (2nd ed.). The Guilford Press.
- Cash, T. F., & Szymanski, M. L. (1995). The development and validation of the Body-Image Ideals Questionnaire. *Journal of Personality Assessment*, 64(3), 466–477. https://doi.org/10.1207/s15327752jpa6403_6
- Chua, T. H. H., & Chang, L. (2016). Follow me and like my beautiful selfies: Singapore teenage girls' engagement in self-presentation and peer comparison on social media. *Computers in Human Behavior*, 55, 190–197. <https://doi.org/10.1016/j.chb.2015.09.011>
- Cohen, R., Newton-John, T., & Slater, A. (2017). The relationship between Facebook and Instagram appearance-focused activities and body image concerns in young women. *Body Image*, 23, 183–187. <https://doi.org/10.1016/j.bodyim.2017.10.002>
- Cramer, S., & Inkster, B. (2017). #Statusofmind: social media and young people's mental health and wellbeing. <https://www.rsph.org.uk/our-work/campaigns/status-of-mind.html>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications.

- Duan, C., Lian, S., Niu, G., & Sun, X. (2022). Photo activity on social networking sites and body dissatisfaction: The roles of thin-ideal internalization and body appreciation. *Behavioral Science, 12*(8), 280. <https://doi.org/10.3390/bs12080280>
- Fardouly, J., Willburger, B., & Vartanian, L. (2018). Instagram use and young women's body image concerns and self-objectification: Testing mediational pathways. *New Media & Society, 20*(4), 1380–1395. <https://doi.org/10.1177/1461444817694499>
- Frederick, D., Kelly, M., Latner, J., Sandhu, G., & Tsong, Y. (2016). Body image and face image in Asian-American and white women: Examining associations with surveillance, construal of self, perfectionism, and sociocultural pressures. *Body Image, 113–125*. <https://doi.org/10.1016/j.bodyim.2015.12.002>
- Gahler, H., Dajches, L., Teran, L., Yan, K., & Aubrey, J. S. (2023). Instagram influences: An examination of the tripartite influence model of body image among a racially diverse sample of young-adult women. *Computers in Human Behavior, 145*. <https://doi.org/10.1016/j.chb.2023.107785>
- Gramaglia, C., Delicato, C., & Zeppegno, P. (2018). Body image, eating, and weight: Some cultural differences. In *Body image, eating, and weight* (pp. 427–439). Springer International Publishing. https://doi.org/10.1007/978-3-319-90817-5_31
- Grogan, S. (2017). *Body image: Understanding body dissatisfaction in men, women, and children* (3rd ed.). Routledge.
- Hendrickse, J., Arpan, L. M., Clayton, R. B., & Ridgway, J. L. (2017). Instagram and college women's body image: Investigating the roles of appearance-related comparisons and intrasexual competition. *Computers in Human Behavior, 74*, 92–100. <https://doi.org/10.1016/j.chb.2017.04.027>
- Karazsia, B. T., Murnen, S. K., & Tylka, T. L. (2017). Is body dissatisfaction changing across time? A cross-temporal meta-analysis. *Psychological Bulletin, 143*(3), 293–320. <https://doi.org/10.1037/bul0000081>
- Keski-Rahkonen, A., & Mustelin, L. (2016). Epidemiology of eating disorders in Europe: prevalence, incidence, comorbidity, course, consequences, and risk factors. *Current Opinion in Psychiatry, 29*(6), 340–345. <https://doi.org/10.1097/ycp.0000000000000278>
- Kim, K. B., & Aubrey, J. S. (2015). A cross-cultural comparison of cognitive and affective mediators in the relationship between media use and body image disturbance: focusing on US and Korean women. *Asian Journal of Communication, 25*(5), 507–524. <https://doi.org/10.1080/01292986.2014.995681>
- Lee, H.-R., Lee, H. E., Choi, J., Kim, J. H., & Han, H. L. (2014). Social media use, body image, and psychological well-being: A cross-cultural comparison of Korea and the United States. *Journal of Health Communication, 19*(12), 1343–1358. <https://doi.org/10.1080/10810730.2014.904022>
- Lewis, M. A., & Neighbors, C. (2004). Gender-specific misperceptions of college student drinking norms. *Psychology of Addictive Behaviors, 18*(4), 334–339. <https://doi.org/10.1037/0893-164x.18.4.334>

- Linawati, B. (2020). *Hubungan antara aktivitas foto Instagram dengan ketidakpuasan tubuh pada perempuan emerging adulthood usia 18 hingga 24 tahun di Daerah Istimewa Yogyakarta [The relationship between Instagram photo activity and body dissatisfaction among emerging adulthood women aged 18 to 24 in Yogyakarta]* [Undergraduate Thesis]. Fakultas Psikologi, Universitas Sanata Dharma.
- Mahon, C., & Hevey, D. (2021). Processing body image on social media: Gender differences in adolescent boys' and girls' agency and active coping. *Frontier Psychology, 12*. <https://doi.org/10.3389/fpsyg.2021.626763>
- NapoleonCat. (2022). Instagram users in Indonesia - February 2022. <https://napoleoncat.com/stats/instagram-users-in-indonesia/2022/02/>
- Niide, T. K., Davis, J., Tse, A. M., Derauf, C., Harrigan, R. C., & Yates, A. (2011). Body ideals and body dissatisfaction among a community sample of ethnically diverse adolescents on Kauai, Hawaii. *Hawaii Journal of Public Health, 3*(1), 1–7.
- Piccoli, V., Carnaghi, A., Grassi, M., & Bianchi, M. (2021). The relationship between instagram activity and female body concerns: The serial mediating role of appearance-related comparisons and internalization of beauty norms. *Journal of Community & Applied Social Psychology, 32*, 728–743.
- Sari, N. E., Ibrahim, A., Azam, W., & Yunus, W. (2022). Relationship between sociocultural pressures and body dissatisfaction among female university students in Batam. *Proceedings of the 2nd World Conference on Gender Studies (WCGS 2021), Advances in Social Science, Education and Humanities Research, 649*, 21–34. <https://doi.org/10.2991/assehr.k.220304.004>
- Schaefer, L. M., Harriger, J. A., Heinberg, L. J., Soderberg, T., & Kevin Thompson, J. (2016). Development and validation of the sociocultural attitudes towards appearance questionnaire-4-revised (SATAQ-4R). *International Journal of Eating Disorders, 50*(2), 104–117. <https://doi.org/10.1002/eat.22590>
- Schaefer, L. M., Rodgers, R. F., Thompson, J. K., & Griffiths, S. (2021). A test of the tripartite influence model of disordered eating among men. *Body Image, 36*, 172–179. <https://doi.org/10.1016/j.bodyim.2020.11.009>
- Seekis, V., Bradley, G. L., & Duffy, A. L. (2020). Appearance-related social networking sites and body image in young women: Testing an objectification-social comparison model. *Psychology of Women Quarterly, 44*(3), 377–392. <https://doi.org/10.1177/0361684320920826>
- Shagar, P. S., Donovan, C. L., Boddy, J., Tapp, C., Lee, P., & Harris, N. (2021). Body dissatisfaction, weight-related behaviors, and health behaviors: A comparison between Australian and Malaysian in female emerging adults. *Behavior Change, 38*, 138–163. <https://doi.org/10.1017/bec.2021.9>
- Sharp, G., & Gerrard, Y. (2022). The body image “problem” on social media: Novel directions for the field. *Body Image, 41*, 267–271. <https://doi.org/10.1016/j.bodyim.2022.03.004>
- Showers, C. J., & Larson, B. E. (1999). Looking at body image: The organization of self-knowledge about physical appearance and its relation to disordered eating. *Journal of Personality, 67*(4), 659–700. <https://doi.org/10.1111/1467-6494.00069>

- Stice, E. (1994). Review of the evidence for a sociocultural model of bulimia nervosa and an exploration of the mechanisms of action. *Clinical Psychology Review, 14*(7), 633–661. [https://doi.org/10.1016/0272-7358\(94\)90002-7](https://doi.org/10.1016/0272-7358(94)90002-7)
- Stojcic, I., Dong, X., & Ren, X. (2020). Body image and sociocultural predictors of body dissatisfaction in Croatian and Chinese women. *Frontiers in Psychology, 11*(731). <https://doi.org/10.3389/fpsyg.2020.00731>
- Swami, V., Frederick, D. A., Aavik, T., Alcalay, L., Allik, J., Anderson, D., Andrianto, S., Arora, A., Brännström, Å., Cunningham, J., Danel, D., Doroszewicz, K., Forbes, G. B., Furnham, A., Greven, C. U., Halberstadt, J., Hao, S., Haubner, T., Hwang, C. S., ... Zivcic-Becirevic, I. (2010). The attractive female body weight and female body dissatisfaction in 26 countries across 10 world regions: Results of the International Body Project I. *Personality and Social Psychology Bulletin, 36*(3), 309–325. <https://doi.org/10.1177/0146167209359702>
- Tariq, M., & Ijaz, T. (2015). Development of body dissatisfaction scale for university students. *Pakistan Journal of Psychological Research, 30*(2), 305–322. <https://pjpr.scione.com/cms/abstract.php?id=272>
- Tiggemann, M., Hayden, S., Brown, Z., & Veldhuis, J. (2018). The effect of Instagram “likes” on women’s social comparison and body dissatisfaction. *Body Image, 26*, 90–97. <https://doi.org/10.1016/j.bodyim.2018.07.002>
- Urbayatun, S., & Widhiarso, W. (2012). Variabel mediator dan moderator dalam penelitian psikologi kesehatan mental [Mediator and moderator variables in mental health psychology research]. *Jurnal Psikologi, 39*(2), 180–188. https://jurnal.ugm.ac.id/jpsi/article/view/6985/pdf_9
- Utami, A. A. D., Hikmawati, A. K., & Sunaryo, F. (2021). An Indonesian beauty story: How college women in Indonesia represent beauty, body image, and social media. *Jurnal Darma Agung, 31*(4), 782–792. <https://doi.org/10.46930/ojsuda.v31i4.3230>
- van den Berg, P., Thompson, J., Obremski-Brandon, K., & Coovert, M. (2002). The tripartite influence model of body image and eating disturbance. *Journal of Psychosomatic Research, 53*(5), 1007–1020. [https://doi.org/10.1016/s0022-3999\(02\)00499-3](https://doi.org/10.1016/s0022-3999(02)00499-3)
- Vandenbosch, L., Fardouly, J., & Tiggemann, M. (2022). Social media and body image: Recent trends and future directions. *Current Opinion in Psychology, 45*, 101289. <https://doi.org/10.1016/j.copsyc.2021.12.002>
- Verrastro, V., Fontanesi, L., Liga, F., Cuzzocrea, F., & Gugliandolo, M. C. (2020). Fear the instagram: Beauty stereotypes, body image and instagram use in a sample of male and female adolescents. *Qwerty. Open and Interdisciplinary Journal of Technology, Culture and Education, 15*(1). <https://doi.org/10.30557/qw000021>
- Voges, M. M., Giabbiconi, C.-M., Schöne, B., Waldorf, M., Hartmann, A. S., & Vocks, S. (2019). Gender differences in body Evaluation: Do men show more self-serving double standards than women? *Frontiers in Psychology, 10*. <https://doi.org/10.3389/fpsyg.2019.00544>