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Body Acceptance, Body Dysmorphia Symptoms, and Selfie Behavior: Unpacking their Relationships Among Filipinos

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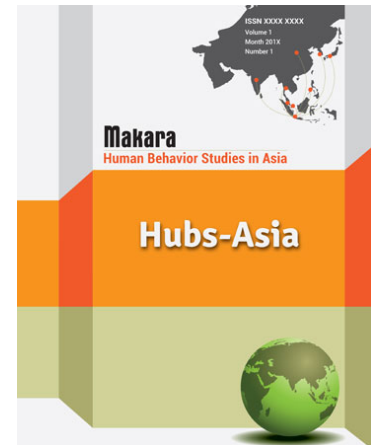
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Body Acceptance, Body Dysmorphia Symptoms, and Selfie Behavior: Unpacking their Relationships Among Filipinos

Penerimaan Tubuh, Gejala Disforia Tubuh, dan Perilaku *Selfie*: Mengupas Hubungan di Antara Mereka pada Orang Filipina

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ABSTRACT

Social media's emergence and proliferation gave rise to 'selfitis,' an obsession-compulsive engagement in photo selfie-related activities. This phenomenon raises a problem, especially for people experiencing body acceptance concerns and body dysmorphia symptoms, as both of these variables may be linked with photo selfie-taking behavior. With the Philippines having the second-highest average daily social media usage globally, the current study explored the association between body acceptance, body dysmorphia symptoms, and selfie behavior. We utilized a cross-sectional explanatory design and investigated body dysmorphia symptoms' possible mediating and moderating role in the relationship between body acceptance and selfitis among 506 Filipinos aged 18 to 58 who voluntarily completed an online battery of tests measuring body acceptance, body dysmorphia symptoms, and selfie behavior. Results showed that body dysmorphia symptoms moderated and partially mediated the association between body acceptance and selfie behavior, offering a more in-depth understanding of these constructs among our Filipino sample. We found no clinical association between selfie-taking and body dysmorphia symptoms, which challenges the notion that frequent selfie-taking is a direct symptom of body acceptance issues. Thus, understanding and addressing body acceptance concerns requires us to move beyond one-size-fits-all approaches and always consider the specific cultural contexts in which they arise.

ABSTRAK

Munculnya dan berkembangnya media sosial telah memunculkan fenomena 'selfitis,' yaitu keterlibatan obsesif-kompulsif dalam aktivitas *selfie*. Fenomena ini menimbulkan masalah, terutama bagi orang-orang yang mengalami masalah penerimaan tubuh dan gejala disforia tubuh, karena kedua variabel ini mungkin terkait dengan perilaku *selfie*. Dengan Filipina menjadi negara kedua dengan rata-rata penggunaan media sosial harian tertinggi di dunia, penelitian ini mengeksplorasi hubungan antara penerimaan tubuh, gejala disforia tubuh, dan perilaku *selfie*. Kami menggunakan desain penjelasan *cross-sectional* dan menyelidiki peran mediasi dan moderasi gejala disforia tubuh dalam hubungan antara penerimaan tubuh dan *selfitis* pada 506 orang Filipina berusia 18 hingga 58 tahun yang secara sukarela menyelesaikan serangkaian tes online untuk mengukur penerimaan tubuh, gejala disforia tubuh, dan perilaku *selfie*. Hasil menunjukkan bahwa gejala disforia tubuh memoderasi dan sebagian memediasi hubungan antara penerimaan tubuh dan perilaku *selfie*, memberikan pemahaman yang lebih mendalam tentang konstruksi ini dalam sampel Filipina kami. Kami tidak menemukan hubungan klinis antara perilaku *selfie* dan gejala disforia tubuh, yang menantang anggapan bahwa *selfie* yang sering merupakan gejala langsung dari masalah penerimaan tubuh. Dengan demikian, memahami dan menangani masalah penerimaan tubuh mengharuskan kita melampaui pendekatan yang seragam dan selalu mempertimbangkan konteks budaya spesifik di mana masalah ini muncul.

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1. Introduction

The emergence and growth of social media have been observed worldwide. Such as in the case of the Philippines wherein the country has the second-highest average of daily social media usage globally with more than four hours of daily use among 76.01 million internet users (Howe, 2023). According to the Statista Research Department (2022), Filipinos spend an average of four hours and eight minutes using social media platforms such as Facebook, Instagram, and Twitter. These platforms make sharing moments effortless, as individuals can post status and life updates through videos and photos within just a few clicks. This allowed selfies to be a popular and common self-presentation strategy on social media (Mills et al., 2018). A selfie can be defined as a self-portrait photo of oneself that is typically shared on social media and was taken using a camera or a camera phone held at arm's length or pointed at a mirror. Selfies include not just solo self-portraits but also pictures of oneself with a friend or group of individuals (Sorokowski et al., 2015), wherein the body or the face is the image's main focus (McLean et al., 2022).

With the increase in popularity and frequency of selfie use, the concept of selfitis emerged. It refers to the obsession of oneself with taking selfies multiple times daily and posting them to social media sites (Begum, 2019). Moreover, an alarming discovery was then made by Mills et al. (2018) wherein their results suggest that common social media behaviors such as selfie-taking and photo-retouching are associated with a decrease in a person's mood, poorer self-image, and lower body image. Further supported by Lonergan et al. (2019) wherein they discovered that photo manipulation and photo investment was positively associated with body dissatisfaction.

The construct of body image is complex. It is a variable that can have significant implications for a person's mental and physical health (Ramos et al., 2019). With the study of De Sousa and colleagues (2016), body image is seen as a multidimensional construct that represents how one feels, thinks, and behaves with regard to their physical characteristics. According to McCallum and colleagues (2021), a positive body image should include body acceptance or the act of accepting one's body as it is. However, body image is also often implicated with body dysmorphia since many individuals with body dysmorphia symptoms experience an inability to objectively perceive their body's appearance, size, or shape making them unable to truly accept their body for what it is (Roosen & Mills, 2014).

The current study focuses on body dysmorphia not as a disorder but as a symptom that is characterized by an excessive preoccupation with a perceived flaw in one's

physical appearance. Body dysmorphia symptoms serves as a viable and appropriate linkage to be the mediating and moderating variable of this study due to its already established relationship with selfie-related behaviors and body acceptance issues. As a mediating variable, body dysmorphia symptoms examine how an individual's acceptance or rejection of their physical appearance may exacerbate their tendency to lean towards selfitis behavior. On the other hand, as a moderating variable, body dysmorphia symptoms determine the circumstances at which level it interacts in the relationship between body acceptance and selfitis.

Literature Review

Selfitis is still an emerging concept that has not yet been thoroughly researched, but certain studies have agreed that obsessive-compulsive engagement in selfie-related activities may be termed as selfitis (Balakrishnan & Griffiths, 2017; Lin et al., 2019; Oppong et al., 2022). Selfie behavior is then the term used to describe taking these "selfies" and submitting them to various social media platforms (Monacis et al., 2020). It is also more than just the taking of a photograph; rather it can also include the editing of the color and contrast, changing backgrounds, and adding other effects before uploading the picture onto a social media platform (Balakrishnan & Griffiths, 2017). Taking and posting selfies allows users to establish their individuality (Ehlin, 2014), their self-importance (Murray, 2015), and their genuine identity or perceived identity (Griffiths, 2019). However, it is also important to understand that although selfies can give others a positive self-verification, those suffering from body image and self-esteem issues can experience further deterioration of their body and self-image (Khanna & Sharma, 2017) as one's perception of their outer look and body image is an essential factor associated with selfie posting in social media (Khan & Imran, 2019).

According to Schiminski (2023), body acceptance means to accept and love the body for what it is and what it can do. It refers to the process whereby individuals attempt to discard what they perceive to be dominant issues with their body in order to achieve a state of comfort or satisfaction with their current body (Bombak et al., 2019). Khan and Imran (2019) discovered a trend wherein the act of taking and posting selfies on social networking sites leads to poor body image due to unfavorable comparisons based on appearance, bodies, and clothing. This is further supported by Mclean and colleagues (2015) study which reported that individuals who share their selfies on social networks exhibit over-evaluation of their weight and height and an internalization of a slim and thin ideal body which leads to body dissatisfaction. They also found that picture editing, photoshopping, and photo investment are associated with body dissatisfaction in

adolescent girls. Which is further supported by Cohen and colleagues (2018) study wherein it stated that engaging with one's selfies in such a self-conscious manner can promote fosters dissatisfaction in one's appearance.

Individuals diagnosed with body dysmorphic disorder (BDD) obsess over certain aspects of their appearance, and any part of the body may be the focus of preoccupation as they often believe that they look abnormal or ugly even though they are not (Neziroglu & Cash, 2008; Phillips, 2017; Phillips & Kelly, 2021). Additionally, because of negative body image, they tend to develop a belief that other people also focus on the flaw they perceive on themselves. They may believe that people take notice of their perceived defect or stare and laugh at them due to their appearance. Apart from this, they also fear rejection and judgment from people, making them avoid social gatherings or even public spaces (Wilhelm et al., 2012). Khanna and Sharma's (2017) study on the psychopathology of body dysmorphic disorder (BDD) states that the use of technology, which includes browsing and posting on social media through devices, can also significantly contribute to the maintenance and precipitation of BDD as individuals with BDD obsess over certain aspects of their appearance, and any part of the body. Phillips and Kelly (2021) further support this by stating that individuals with body dysmorphia may become excessively focused on perceived defects or deficiencies in their physical appearance, which can lead to extreme distress, obsessive comparisons to others, spending an unreasonable amount of time focusing on their appearance, and engaging in excessive repetitive behavior to reduce their anxiety or distress. This is the same as with selfies, the easiness of taking selfies and various ways to enhance and edit a photo may also eventually lead to the obsessive compulsion of individuals with BDD to take the 'perfect selfie' as they try to manage the anxiety and distress they are experiencing (Ehmke, 2023; Murray, 2021).

Upon reviewing the existing literature, selfitis is an emerging concept regarding one's obsession with selfie-related activities. It is a concept that requires further study as previously mentioned studies have already shown that selfie-related behaviors can affect an individual psychologically, specifically, one's perception of their own body. Furthermore, little is known about the relationship between body acceptance, body dysmorphia symptoms, and selfitis (Balakrishnan & Griffiths, 2017; Moumina et al., 2022). Most of the existing research around the variables focuses on adolescents or millennials, such as in the studies conducted by George and Sharma (2019) and Kela and colleagues (2017) that focus on students' selfie behavior in Ghana and India. In addition, research was conducted about the mediating effects of selfitis on body

appearance and self-esteem at a university in Ghana (Oppong et al., 2022). Furthermore, there is a lack of information regarding the psychological effects regarding the acts of editing and uploading a selfie and its aftermath on one's body acceptance (Shome et al., 2019). Thus, our study will focus on the connections among body acceptance, body dysmorphia symptoms, and selfitis—not just between selfitis and body image, examined in the Filipino context.

A flexible and unifying framework, namely the Self-Validation Theory (SVT), will bring all these variables together. The Self-Validation Theory by Briñol and Petty (2021) presented an integrative framework with six postulates that revolve around the idea that the increasing validity of perceived thoughts can greatly influence an individual. SVT portrays how internal and external variables can influence the validity of an individual's perceived thoughts, which can affect their self-validation and ultimately result in a change in beliefs, judgments, and behavior. Thus, as a metacognitive approach, SVT has a flexible model of how various factors can influence an individual in multiple and interrelated aspects. Lastly, although existing literature focuses on selfie-sharing behavior, a considerable research gap exists regarding individuals' thoughts or motivations to engage in such behavior (Stefanone et al., 2019). Thus, SVT might be able to shed light on how thoughts influenced by internal and external factors can stimulate a change in an individual's behavior.

Relatively, there are theoretical frameworks offering insights into how body acceptance can trigger reactive behaviors, such as engaging in selfie-taking. Cognitive-Behavioral Theory (CBT) suggests that perceptions, evaluations, and beliefs can lead to behavioral responses (Bandura, 2001). Likewise, the Self-Regulation Theory (see Förster & Denzler, 2009) proposes that a conscious system of personal management guides individuals' thoughts, behaviors, and feelings to achieve specific goals based on personal expectations and preferences. The Theory of Self-presentation (see Baumeister & Vohs, 2007) elucidates that through self-presentation, which encompasses a range of behaviors known as impression management, individuals control or shape how others perceive them. According to these theoretical frameworks, our perception of our body and ideal body characteristics can drive subsequent behaviors, such as selfie-taking, to attain specific goals and an ideal status influenced by our perceptions.

We hypothesize that: (1) A significant relationship exists between body acceptance, body dysmorphia symptoms, and selfitis; (2) body acceptance significantly predicts selfitis; (3) body dysmorphia symptoms mediate and moderate the relationship between body acceptance and selfitis, wherein negative

body acceptance will increase selfitis because of body dysmorphia symptoms. We aim to provide critical knowledge regarding body acceptance, body dysmorphia symptoms, and selfitis in the Philippines. Our study seeks to contribute to and advance the literature on the given variables for use, especially given the scarcity of available studies on selfie behavior and body issues in the country.

2. Methods

Design

This study used a cross-sectional explanatory research design (Belli, 2009; Johnson, 2001) to investigate the mediating and moderating role of body dysmorphia symptoms in the relationship between body acceptance and selfitis. We hypothesized that the negative perception of one's body acceptance (independent variable) would increase selfitis (dependent variable) because of body dysmorphia symptoms (mediating/moderating variable). A cross-sectional explanatory research design was appropriate since we would want to determine the relationship between body acceptance and selfitis with body dysmorphia symptoms as a mediating and moderating variable in the Filipino adult population at a single point in time. Additionally, it is advantageous to use this research design as it is relatively inexpensive, less time-consuming, and does not require follow-up on participants (Zangirolami-Raimundo et al., 2018).

Participants

A total of 506 Filipinos (140 male; 366 female) aged 18 to 58 ($M = 36.9$; $SD = 12.0$) participated in our study. We targeted a minimum sample size of 385 participants because a sample size for a survey needs to be estimated conventionally or through statistical software (Andrade, 2020). Our sample size was calculated through an online sample size calculator, Raosoft (2004), an online sample size calculator that numerous studies have utilized to calculate their sample size (Crilly et al., 2017; Desalu et al., 2018). We accepted a margin of error of 5% within a confidence level of 95%. The minimum sample size was drawn from a population of 72,925,605 individuals cited by the World Bank (2022) as the estimated total population of Filipino citizens ages 15 to 64 in the Philippines for 2021.

The current study employed a purposive sampling approach with the following criteria: (1) Filipino citizen, (2) currently living in the Philippines, (3) ages 18 to 58 years old, (4) who at least uses one social media platform (Facebook, Instagram, or Twitter), and (5) participates in the taking and posting of selfies on at least one of the aforementioned social media platforms. Purposive sampling selects participants most likely to

yield appropriate and valuable information (Kelly, 2010). We used purposive sampling to select participants who take and post selfies on at least one social media platform. Purposive sampling will increase the validity of the current study by ensuring that the data gathered from this sample will be relevant and applicable to the research questions and objectives. Furthermore, by setting the criteria, such as the use of social media and participation in taking and posting selfies, data gathering would be more efficient as we can more quickly identify and recruit participants who are likely to provide the information that would contribute to the study. Additionally, selfies were operationalized that can either be a picture of yourself, your whole body, or with a group of people; selfies posted on their social media platform do not necessarily need to be posted recently. Our sample is considered 'non-clinical' because participants answered a screening question in our questionnaire, "Have you been diagnosed with a psychological condition (e.g., Body Dysmorphic Disorder)," and those who answered "Yes" were immediately excluded from the data collection.

Measures

Body Acceptance subscale of Dresden Body Image Questionnaire-35 (DKB-35)

An English translation of the German scale Dresdner Körperbildfragebogens by Pöhlmann and colleagues (2013), the DKB-35 was initially validated in German; however, the questionnaire was translated by a native German speaker into English, following the star paradigm, with permission (Lev-Ari, 2017). The current study used the Body Acceptance subscale of the DKB-35 because we intend to measure how satisfied individuals are with their bodies as a unidimensional construct. Each statement in the BA subscale (e.g., "I like my body."; "I am satisfied with how I look.") is answered through a Likert scale ranging from 'not at all true for me' (1) to 'very true for me' (5). The total subscale score is computed by adding the responses with a high score indicating higher body acceptance. According to Lev-Ari and colleagues (2020), the reliability of the subscales was excellent, and Cronbach's alphas were between 0.80 and 0.90. Furthermore, to assess the convergent validity of the Body Acceptance subscale of DKB-35, the Eating Attitudes Test (EAT-26), Eating Disorders Inventory Body Dissatisfaction subscale (EDIbd), and Satisfaction with Life Scale (SWLS) were used. Results showed the DKB-35 Body Acceptance subscale correlated positively with SWLS; body acceptance ($r(280) = .51$, $p < .001$) and negatively with EAT-26; body acceptance ($r(280) = -.48$, $p < .001$), and EDIbd; body acceptance ($r(280) = -.77$, $p < .001$). In the current study, the DKB-35 Body Acceptance Subscale had a Cronbach's alpha reliability of 0.75.

Selfitis Behavior Scale (SBS)

A 20-item standardized test was developed by Balakrishnan and Griffiths (2017) to measure the sub-dimensions of selfitis about the different aspects of selfie-taking behavior. The test utilized a 5-point Likert Scale, ranging from 'strongly disagree' (1) to 'strongly agree' (5). SBS has identified six subscales namely: (1) Environmental Enhancement (four items, e.g., "*Taking selfies gives me a good feeling to better enjoy my environment.*") refers to the positive feelings related to taking selfies in the context of creating good memories; (2) Social Competition (four items, e.g., "*Sharing my selfies creates healthy competition with my friends and colleagues.*") refers to the tendency of social creativity to create a more competitive environment; (3) Attention Seeking (three items, e.g., "*I gain enormous attention by sharing my selfies on social media.*") refers to the narcissistic behavior of taking selfies for the purpose of gaining attention from others; (4) Mood Modification (three items, e.g., "*I am able to reduce my stress level by taking selfies.*") refers to the personal experience of getting a positive feeling toward selfie-taking behaviors; (5) Self-Confidence (three items, e.g., "*I take more selfies and look at them privately to increase my confidence.*") refers to the straightforward concept of gaining confidence when taking selfies and significantly enhancing it with technology; and (6) Subjective Conformity (three items, e.g., "*When I don't take selfies, I feel detached from my peer group.*") refers to the innate instinct of people to follow accepted social norms. The scores on all six sub-scales are added together to arrive at an overall SBS score. The greater the score, the higher the likelihood that selfitis behavior might occur. The scale's overall reliability is also excellent, with a Cronbach's alpha score of 0.876. According to the confirmatory factor analysis, the results of its six-factor model were considered an excellent fit with standardized values of more than 0.60 that met the criteria needed for content validity. Moreover, the average variance extracted from all the sub-dimensions has a value above 0.5, which also satisfies the requirements for the convergent validity of the scale. The SBS in our study had a 0.94 Cronbach's alpha reliability.

Dysmorphic Concern Questionnaire (DCQ)

A seven-item self-report measure and screening tool developed by Oosthuizen and colleagues in 1998 assesses dysmorphic concerns ranging from mild to excessive (Schieber et al., 2018). DCQ can be answered using a four-point Likert scale ranging from 'not at all' (0) to 'much more than most people' (3). Sample items are: "*Been very concerned about some aspect of your physical appearance.*" and "*Considered your body to be malfunctioning in some way (e.g., excessive body odour, flatulence, sweating).*" According to Rozzell et al. (2020), no items are reverse-scored, and the score in each item can be summed. A high total score exhibits a

high level of disturbance regarding a part of one's appearance or bodily functioning. Oosthuizen and colleagues (1998) reported that the Cronbach alpha of the questionnaire was 0.88. Furthermore, Stangier et al. (2003) examined the convergent validity between the Dysmorphic Concern Questionnaire and the Yale-Brown Obsessive Compulsive Scale modified for BDD (BDD-YBOCS). Results show that DCQ has a significant and high correlation with BDD-YBOCS ($r(63) = .74, p < .001$). A DCQ Cronbach's alpha of 0.80 was found in the present study.

Procedure

Data collection started after obtaining ethical review approval from The Philippine Social Science Council-Social Science Ethics Review Board (Reference Code: CA-23-27). Google Forms was created to contain information about the study, an informed consent form, a Personal Data Sheet (PDS), and a battery of tests. The publication materials were shared and posted on social media sites, providing necessary information for participation. Consent was checked, and a page thanking those who took the time to consider responding was used for those who did not provide consent. Participants who fulfilled the participation requirements entered their demographic data in a section in the Google Form. The participants then completed the Selfitis Behavior Scale (SBS), the Body Acceptance subscale of Dresden Body Image Questionnaire-35 (DKB-35), and the Dysmorphic Concern Questionnaire (DCQ). The test battery was programmed using allocate.monster to randomly sequence the three tests to control systematic order effects. A page informing the participants of the study's name, purpose, and confidentiality was also displayed in Google Forms. Lastly, a page thanking the participants for their participation and debriefing them was displayed. The data was organized and copied into a separate Excel page. The data was then scored, interpreted, and ran through the statistical program Jamovi.

Data Analysis

The study used statistical techniques such as Correlation, Linear Regression, Mediation Analysis, and Moderation Analysis to determine the relationships present between body acceptance, body dysmorphia symptoms, and selfitis and to further explain the effect of body acceptance on selfitis because of body dysmorphia symptoms. These methods were used in Jamovi version 2.3.26 software, wherein additional modules, namely the Linear Models, Mediation-Moderation, and Advanced Mediation Models, were installed to get comprehensive results.

The study utilized a p -value of 0.05 or 5% and a confidence interval calculated at 95%, which ensured that the results were statistically significant and contained valid population parameters. Correlation analysis was used to confirm the initial relationship between our research variables. Partial correlation was likewise conducted to examine whether age and assigned sex at birth has a significant relationship with the variables studied after which they were controlled for the subsequent data analyses to control for possible confounding effect. Furthermore, linear regression was used to assess the significance of the relationship between body acceptance and selfitis. By utilizing the General Linear Model (GLM) Mediation Model, we determined the predictive value of the variables and reported the direct and indirect relationships between each variable. Lastly, moderation analysis, followed by a simple slope analysis, was utilized to investigate whether body dysmorphia symptoms moderate body acceptance and selfitis at certain levels.

3. Results

Table 1 shows the descriptive statistics of all three of our research variables; body acceptance ($M = 19.8$, $SD = 4.59$), body dysmorphia symptoms ($M = 4.01$, $SD = 3.12$), and selfie behavior (selfitis) ($M = 55.8$, $SD = 16.2$). The data analyzed as presented in Table 1 also indicated that body acceptance was significantly associated with body dysmorphia symptoms ($r = -.531$, $p < .001$). The inverse relationship also implies that lower body acceptance is significantly related to higher body dysmorphia symptoms. Likewise, body dysmorphia symptoms were found to be significantly positively associated with selfie behavior ($r = .093$, $p = .037$) indicating that higher body dysmorphia symptoms are significantly correlated with increased selfie behavior. However, no significant relationship was found between selfie behavior and body acceptance ($r = 0.041$, $p = .356$).

[Table 1 about here]

Pearson correlation coefficients were also computed to examine the relationships between our demographic variables (assigned sex at birth and age) with that of our research variables (body acceptance, body dysmorphia symptoms, and selfitis). As shown in Table 1, there was a significantly weak negative correlation between assigned sex at birth and body acceptance, ($r = -.078$, $p = .039$). This indicates that females, on average, might be slightly more concerned about their body acceptance than males. However, assigned sex at birth was observed to have no significant correlation with that of body dysmorphia symptoms ($r = -.030$, $p = .253$) and selfie behavior. ($r = .006$, $p = .447$). Table 1 also shows that age and body acceptance have a significant moderate positive correlation ($r = .292$, $p < 0.1$). This

indicates that as age increases, the perception of body acceptance also tends to improve. Moreover, significant moderate negative correlation was found between age and body dysmorphia symptoms ($r = .444$, $p < 0.1$), indicating that the higher the age, the lower the presence of body dysmorphia symptoms. Lastly, no significant relationship was observed between age and selfie behavior.

To address the significant findings between assigned sex at birth and age with our research variables. A partial correlation between our research variables was conducted, with assigned sex at birth and age controlled. Results in Table 2 indicate that the relationship between body acceptance and body dysmorphia symptoms, as well as selfie behavior and body dysmorphia symptoms, are statistically significant, with ($r = -.468$, $p < .001$) and ($r = .095$, $p = 0.033$), respectively. However, the associations between selfie behavior and body acceptance did not reach statistical significance ($r = .050$, $p = 0.265$). Additionally, upon checking the linear regression between body acceptance and selfie behavior while controlling for assigned sex at birth and age, results remained consistent that they have no significant relationship ($p = 0.461$) (Adjusted $R^2 = 0.0359$), with only a 3.59% increase in reported selfie behavior (selfitis) for every one unit increase of body acceptance.

[Table 2 about here]

A mediation analysis was conducted to examine the mediating effect of body dysmorphia symptoms on body acceptance and selfitis while controlling age and assigned sex at birth (see Table 3). The model's total effect was not significant ($\beta = 0.058$, $SE = 0.166$, $z = 1.226$, $p = 0.220$). However, there was a significant direct effect on body acceptance and selfitis ($\beta = 0.128$, $SE = 0.185$, $z = 2.443$, $p = 0.015$). Lastly, a statistically significant indirect effect was shown by the mediation of body dysmorphia symptoms to the relationship of the independent and dependent variable ($\beta = -0.071$, $SE = 0.088$, $z = -2.836$, $p = 0.005$). These results suggest that body dysmorphia symptoms partially mediate the relationship between body acceptance and selfitis.

[Table 3 about here]

Furthermore, a moderation analysis was performed with body acceptance as the predictor, selfitis as the dependent, and body dysmorphia symptoms as a moderator. The results indicated that the interaction between body acceptance and body dysmorphia symptoms was significant, $\beta = 0.113$, $SE = 0.051$, $t(500) = 2.228$, $p = .026$, 95% CI [0.013, 0.213]. These indicate that body dysmorphia symptoms moderate the relationship between body acceptance and selfie behavior. The inclusion of age and assigned sex at birth

as control variables allowed the model to isolate the unique effects of body acceptance, body dysmorphia symptoms, and their interaction on selfie behavior. However, neither age nor assigned sex at birth had a significant effect on selfie behavior, suggesting that these demographic factors do not play a major role in predicting selfie-behavior when body acceptance and body dysmorphia symptoms are included in the model: assigned sex at birth did not significantly predict selfie behavior, $\beta = 0.733$, $SE = 1.626$, $t(500) = 0.451$, $p = .652$, 95% CI [-2.462, 3.928]. Age also did not have a significant effect on selfie behavior, $\beta = -0.216$, $SE = 0.973$, $t(500) = -0.222$, $p = .825$, 95% CI [-1.128, 1.696].

A simple slope analysis, as presented in Table 4, was also conducted and revealed that at low levels of body dysmorphia symptoms, body acceptance did not predict selfie behavior (selfitis) ($\beta = 0.190$, $SE = 0.218$, $p = .385$). However, body acceptance predicts selfie behavior (selfitis) when body dysmorphia symptoms are either average ($\beta = 0.542$, $SE = 0.190$, $p = 0.005$) or high ($\beta = 0.895$, $SE = 0.273$, $p = .001$).

[Table 4 about here]

4. Discussion

The present study sought to explore the potential mediating and moderating role of body dysmorphia symptoms between body acceptance and selfitis, as well as the direct relationships between these variables. We sought to answer the following inquiries: (1) do body acceptance, body dysmorphia symptoms, and selfie behavior (selfitis) have a significant relationship? (2) does body acceptance significantly predicts selfie behavior (selfitis)? (3) does body dysmorphia symptoms mediate and moderate the relationship between body acceptance and selfie behavior (selfitis)? Contrary to common assumptions, our research found no clinical link between selfie-taking behaviors and body dysmorphia symptoms among Filipinos. This suggests that frequent selfie-taking, in itself, may not be a reliable indicator of body dysmorphia symptoms in this population.

Our investigation found that body acceptance is significantly associated with body dysmorphia symptoms. This implies that changes in their perception and acceptance of their bodies are related to the presence and absence of body dysmorphia symptoms. This is supported by Roosen and Mills' study (2014), which explained that body acceptance as an aspect of body image is a construct often implicated in body dysmorphia since most individuals with body dysmorphia symptoms do not objectively perceive their body's appearance, size, or shape. However, in our participants, it was revealed that their body acceptance

does not correlate with selfitis. This could mean that Filipinos, regardless of their satisfaction or dissatisfaction with their body, are not indicators pointing to their tendency to engage in selfitis. Body dysmorphia symptoms, on the other hand, have a significant relationship with selfitis. This acknowledges that such symptoms are related to the probability of an individual's engagement in obsessive-compulsive aspects of selfie behavior. The study of Murray (2021) supports this notion by emphasizing that individuals may become so fixated on their endless attempts to take the "perfect selfie" that it eventually leads to obsessive compulsions within individuals with body dysmorphia as they try to manage the anxiety and distress that they are experiencing due to their body or facial concerns.

We recognize that while age and assigned sex at birth are not part of our main variables for the study they might still contribute to possible confounding effects in their relationships. Hence, we explored their associations with our variables. According to the results of assigned sex at birth on body acceptance, it has been found that they are associated with each other specifically that females, on average, might be slightly more concerned about their bodies than males. Similarly, Quittkat and colleagues' study in 2019 also found the same result and further emphasized that women put more importance on their appearance. However, assigned sex at birth does not have a significant association with body dysmorphia symptoms and selfitis. Unlike previous studies where either males or females are more prone to developing body dysmorphic symptoms (Alghamdi et al., 2022; Bartsch, 2007; Taqui et al., 2008), our study suggests that for Filipinos, there is no special distinction between sexes that is inclined towards body dysmorphia symptoms. Moreover, research by Schneider et al. (2019) indicates that both male and females are equally likely to report experiencing certain BDD symptoms and that the overall severity of the symptoms shows no significant variation between sexes in terms of intensity. It was also shown in our study that there is no significant difference between sexes in their tendency toward selfitis. This is consistent with the results in the journal of Reyes (2021), where he further remarked that factors like culture and demographics can influence the prediction of the behavior of taking selfies. Additionally, our analysis revealed that age and body acceptance have a significant association whereas as age increases, the perception of body acceptance also tends to improve. As people age, the significance given to physical appearance lessens as well (Peat et al., 2008). The same study also reveals factors such as life experiences, maturity, and decreased exposure to unrealistic standards help reduce the susceptibility to body dissatisfaction in adults. In the same direction, a significant correlation between age and body dysmorphia symptoms indicates that the higher the age,

the lower the presence of body dysmorphia symptoms in an individual. According to Bjornsson and colleagues (2013), body dysmorphia symptoms primarily appear before or during adolescence which is a time often attached to psychological and interpersonal changes, especially to their bodies. Their study revealed that older adult participants in their 40s did not have an onset of body dysmorphia symptoms at this stage. Lastly, no significant relationship was observed between age and selfitis. It has not come as a surprise that Filipinos, as globally known avid social media users (Howe, 2023), like to engage in selfie activities regardless of age.

To address the confounding effects of age and assigned sex at birth to body acceptance, body dysmorphia symptoms, and selfitis, they are controlled to establish robust relationships among our variables. Results showed that while changes in age and distinctions in assigned sex at birth are associated with some aspects of our variables, their potential effects are minimal and did not account for significant changes. This implies that the established relationship between body acceptance, body dysmorphia, and selfitis are realistic estimates of how they are associated with each other. Furthermore, regression analysis revealed that body acceptance does not predict selfitis. This indicates that there is no definitive connection linking the satisfaction or dissatisfaction of Filipinos with their bodies to the possibility of engaging in obsessive-compulsive aspects of selfie-related activities. These results are supported by Digamon and colleagues' (2020) study, which investigated the effects of selfie behavior on Filipino senior high students' self-esteem and body satisfaction. Their findings show that the frequency of selfie-taking and posting did not impact their respondents' self-esteem and body satisfaction. Additionally, according to Garcia and colleagues' (2019), perception of the body is not a fixed or inherent characteristic of an individual; instead, it is something that can change over time and be influenced by various internal and external factors. Therefore, instead of being a stable aspect of a person's identity, perception of the body can vary in response to different experiences, environments, and perceptions which do not ultimately lead to selfitis.

Our mediation analysis found that body dysmorphia symptoms partially mediate the relationship between body acceptance and selfitis. Specifically, as body acceptance decreases, body dysmorphia symptoms increase, which in turn leads to higher selfitis. This implies that people with lower body acceptance are more likely to experience body dysmorphia symptoms, which subsequently increases their engagement in obsessive-compulsive selfie-related behaviors. Drawing from Wilhelm's (2006) study, individuals with low self-esteem tend to engage more in the practice of taking selfies because they utilize social media platforms to

facilitate their interpersonal interactions, aiming to satisfy their self-esteem requirements. Given all of these, we can say that the presence of body dysmorphic symptoms aggravates the body acceptance of individuals, making them engage more in selfie-taking behavior. To further understand the negative relationship between body acceptance and body dysmorphia symptoms, we look into the study conducted by Arji and colleagues (2016) which suggests that individuals with a more favorable perception of their body tend to exhibit fewer body dysmorphia symptoms. In contrast, those with a negative body perception are more likely to experience symptoms associated with the disorder. As such, individuals' perceptions of their bodies can considerably be a huge factor in the severity and manifestation of body dysmorphia symptoms. Lastly, the positive relationship between body dysmorphia symptoms and selfitis can be further understood in the study of Gupta and colleagues (2023) where they found that the frequency of social media use of image-based platforms has a significant relationship with body dysmorphia symptoms. Their results showed that the appearance-focused repetitive behaviors of those suffering from body dysmorphia symptoms are one of the main factors that drive their active participation in social media, like posting pictures. This finding is also supported by the study by Ehmke (2023), where the body dysmorphic symptom of obsession with the perceived flaws in one's appearance resulted in a significant increase in selfie behavior. Therefore, our study provides evidence that people with low body acceptance combined with body dysmorphia symptoms are more likely to have an increased tendency towards selfitis.

Our moderation analysis results indicate that individuals experiencing negative body acceptance are more inclined to engage in selfie behavior, and this is especially true for those individuals who have body dysmorphia symptoms. Our findings show that individuals with low levels of body dysmorphia symptoms did not exhibit a significant relationship between body acceptance and selfitis. However, individuals experiencing average to high levels of body dysmorphia symptoms demonstrated a moderating effect, indicating the role of body dysmorphia in shaping selfie behavior. Thus, individuals with higher levels of body dysmorphia are more sensitive to changes in body acceptance, which in turn affects their level of selfitis behavior. A possible reason for the noted variances between individuals with high and low levels of dysmorphic concern lies in the difference in the cognitive processes individuals employ when evaluating physical appearance (Dondzilo et al., 2021). A study conducted by Khanna and Sharma (2017) suggests that girls diagnosed with BDD may attempt to enhance their self-esteem by engaging in selfie-taking behavior and seeking validation. However, this pursuit may often

result in distorted perceptions and unwarranted assumptions. Although the earlier research by Khanna and Sharma (2017) primarily examined the behaviors of girls, it is worth noting that boys, despite any gender disparities, are also active users of social media, engaging in activities such as posting, commenting, and liking, and are likewise exposed to idealized images (Steinsbekk et al., 2021). This is supported by the fact that our results show that there is no significant effect if age and assigned sex at birth are accounted for. This suggests that, regardless of being male or female, the relationships between body acceptance, body dysmorphia symptoms, and selfitis remain consistent.

Limitations and Future Directions

While this study contributes valuable insights into the variables involved, it is important to acknowledge some limitations that may impact the interpretation and generalizability of the findings. The concentration of Filipino participants primarily from the National Capital Region (NCR) may limit the inclusivity of other regions in Visayas and Mindanao. Furthermore, the data sample is skewed against men as there is a considerable overrepresentation of female participants, which can lead to biased conclusions. As such, a widespread demographic location and a balanced number of male and female participants are recommended to increase generalizability in the Filipino context. Moreover, the study's research approach does not establish causality in the relationships among body acceptance, body dysmorphia symptoms, and selfitis. Therefore, future researchers are recommended to investigate these associations further. These limitations underscore the need for caution in generalizing the results beyond the study's specific context. Another limitation is the reliance on self-report measures and the assumption that participants may have response sets when completing the online survey. As such, future researchers may consider qualitative strategies to validate the responses.

Essential demographic variables, such as age and assigned sex at birth were also controlled and not considered in the data analyses. As such, future research is recommended to consider these variables in the investigation as body acceptance, body dysmorphia symptoms, and selfie behavior may be dependent on these demographic variables. It may also be worth looking into why Filipinos like taking selfies, but many do not post them on their social media platforms. As avid social media users, there may be an underlying reason or pattern behind such behavior restricting people from sharing photos of themselves online. Therefore, other variables related to selfie behavior should be investigated such as only taking selfies but not uploading and those uploading selfies, and those who also edit their selfies before posting. Including any

distinctions made between these behaviors in future studies may ensure the accuracy of the study's results.

5. Conclusion and Implications

Overall, this study contributes to the growing literature on body acceptance, body dysmorphia symptoms, and the emerging concept of selfitis, especially in the Filipino context. Our study revealed that body dysmorphia symptoms act as a partial mediator in the relationship between body acceptance and selfie behavior (selfitis). Moreover, our findings emphasize the moderating influence of body dysmorphia symptoms, showcasing varying degrees of association between body acceptance and selfie behavior across distinct levels of body dysmorphia symptoms severity. The findings uncovered the complex relationship between body acceptance and selfitis demonstrating an inverse relationship during mediation and moderation. This finding leads us to the relevant role of body dysmorphia symptoms as one of the aspects that can partially influence one's body acceptance perception and selfie behavior. Additionally, the moderating role of body dysmorphia symptoms showed that people with body acceptance concerns have a higher tendency to engage in activities related to selfie behavior. These results enhance our understanding of the multifaceted interrelation among body acceptance, body dysmorphia symptoms, and selfitis, emphasizing the varying dynamics across distinct analytical frameworks and understanding them in the Filipino context.

Much of the existing research on body acceptance and self-presentation online stems from Western contexts. Our finding suggests that these assumptions might not hold true across all cultures, particularly in the Philippines. Filipino culture may have unique influences on body acceptance, self-presentation, and the motivations behind selfie-taking. Motivations for selfie-taking and the role of social media platforms may be an avenue for future research, as well as longitudinal studies on how body acceptance, selfitis, and body dysmorphia symptoms change over time among Filipinos. Lastly, mental health professionals in the country should also consider other culturally sensitive assessment methods if selfie-taking is not a reliable indicator of body dysmorphia symptoms among Filipinos.

Declarations

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Conflicts of interest/Competing interests

The authors have no conflicts of interest to declare relevant to the content of this article.

Availability of data and material

Not applicable

Code availability

Not applicable

Ethics approval

All procedures performed in the present study that involved human participants were per the ethical standards of The Philippine Social Science Council-Social Science Ethics Review Board (PSSC-SSERB) with Reference Code CA-23-27.

Consent to participate

The current study gave informed consent before voluntary participation. In addition, participants were briefed on the nature of the study, assured that all data collected would be kept confidential, and that participation was voluntary without remuneration.

Consent for publication

Not applicable

References

- Alghamdi, W. A., Subki, A. H., Khatib, H. A., Butt, N. S., Alghamdi, R. A., Alsallum, M. S., Alharbi, A. A., Almatrafi, M. N., Alobisi, A. A., Al-Zaben, F., & Koenig, H. G. (2022). Body Dysmorphic Disorder Symptoms: Prevalence and Risk Factors in an Arab Middle Eastern Population. *International Journal of General Medicine*, Volume 15, 2905–2912. <https://doi.org/10.2147/IJGM.S329942>
- Andrade, C. (2020). Sample size and its importance in research. *Indian Journal of Psychological Medicine*, 42(1), 102–103. https://doi.org/10.4103/ijpsym.ijpsym_504_19
- Arji, M., Borjali, A., Sohrabi, F., & Farrokhi, N. A. (2016). Role of Perfectionism and Body Image in the Prediction of Body Dysmorphic Disorder Symptoms. *Avicenna Journal of Neuro Psycho Physiology*, 3(3), 62–65. <https://doi.org/10.5812/ajnpp.42560>
- Balakrishnan, J., & Griffiths, M. D. (2017). An exploratory study of "selfitis" and the development of the selfitis behavior scale. *International Journal of Mental Health and Addiction*, 16(3), 722–736. <https://doi.org/10.1007/s11469-017-9844-x>
- Bandura, A. (2001). Social cognitive theory: an agentic perspective. *Annual Review of Psychology*, 52, 1–26. <https://doi.org/10.1146/annurev.psych.52.1.1>
- Bartsch, D. (2007). Prevalence of body dysmorphic disorder symptoms and associated clinical features among Australian university students. *Clinical Psychologist*, 11(1), 16–23. <https://doi.org/10.1080/13284200601178532>
- Baumeister, R. F., & Vohs, K. D. (2007). Self-presentation. In *Encyclopedia of Social Psychology* (pp. 836–838). SAGE Publications, Inc., <https://doi.org/10.4135/9781412956253>
- Belli, G. (2009). Chapter 4: Nonexperimental quantitative research. In S. D. Lapan & M. T. Quartaroli, *Research Essentials: An Introduction to Designs and Practices* (pp. 59–77).
- Begum, F. (2019). Selfitis: A newer behavioral addiction - A Review. *International Journal of Trend in Scientific Research and Development (IJTSRD)*, 3(5).
- Bjornsson, A. S., Didie, E. R., Grant, J. E., Menard, W., Stalker, E., & Phillips, K. A. (2013). Age at onset and clinical correlates in body dysmorphic disorder. *Comprehensive Psychiatry*, 54(7), 893–903. <https://doi.org/10.1016/j.comppsy.2013.03.019>
- Bombak, A. E., Meadows, A., & Billette, J. (2019). Fat acceptance 101: Midwestern American women's perspective on cultural body acceptance. *Health Sociology Review*, 28(2), 194–208. <https://doi.org/10.1080/14461242.2019.1604150>
- Briñol, P., & Petty, R. E. (2021). Self-validation theory: An integrative framework for understanding when thoughts become consequential. *Psychological Review*, 129(2), 340–367. <https://psycnet.apa.org/doi/10.1037/rev0000340>
- Cohen, R., Newton-John, T., & Slater, A. (2018). "Selfie"-objectification: The role of selfies in self-objectification and disordered eating in young women. *Computers in Human Behavior*, 79(1), 68–74. <https://doi.org/10.1016/j.chb.2017.10.027>
- Crilly, P., Patel, N., Ogunrinde, A., Berko, D., & Kayyali, R. (2017). Community pharmacists' involvement in research in the United Kingdom. *Pharmacy*, 5(4), 48. <https://doi.org/10.3390/pharmacy5030048>
- Desalu, O. O., Sanya, E. O., Adeoti, A. O., Aderibigbe, S. A., & Kolo, P. M. (2018). Impact of operational definitions on the predictors and prevalence of asthma estimates: Experience from a university students' survey and implications for interpretation of disease burden. *Ethiopian Journal of Health Sciences*, 28(6). <https://doi.org/10.4314/ejhs.v28i6.7>

- De Sousa, A., Dutta, E., Sharma, P., Dikshit, R., Shah, N., Sonavane, S., & Bharati, A. (2016). Attitudes toward selfie taking in school-going adolescents: An exploratory study. *Indian Journal of Psychological Medicine*, 38(3), 242. <https://doi.org/10.4103/0253-7176.183094>
- Digamon, J. S., Mabilen, R. M., Baranggan, J. L., Abad, A. T., Saraus., K. P., Tion, K. N., Acenas, M. E. (2020). Selfie phenomenon: Its implications to self-esteem and body image satisfaction. *ResearchGate*. <https://doi.org/10.13140/RG.2.2.31832.52480>
- Dondzilo, L., Fanny Alexandra Dietel, Buhlmann, U., & MacLeod, C. (2021). The role of biases in the judgement processing of (un)attractive faces in body dysmorphic symptomatology. *Behaviour Research and Therapy*, 144, 103919–103919. <https://doi.org/10.1016/j.brat.2021.103919>
- Ehlin, L. (2014). The subversive selfie: redefining the mediated subject. *Clothing Cultures*, 2(1), 73–89. https://doi.org/10.1386/cc.2.1.73_1
- Ehmke, R. (2023, February 3). What selfies are doing to self-esteem. *Child Mind Institute*. <https://childmind.org/article/what-selfies-are-doing-to-girls-self-esteem>
- Förster, J., & Denzler, M. (2009). A social-cognitive perspective on automatic self-regulation: The relevance of goals in the information-processing sequence. In *Social cognition: The basis of human interaction* (pp. 245–267). Psychology Press.
- Garcia, B., Ferrer-García, M., Olszewska, A., Yilmaz, L., Ibañez, C., Blanes, M., Gültekin, G., Serrano-Troncoso, E., & Maldonado, J. C. (2019). Is this my own body? Changing the perceptual and affective body image experience among college students using a new virtual reality embodiment-based technique. *Journal of Clinical Medicine*, 8(7), 925. <https://doi.org/10.3390/jcm8070925>
- George, S., & Sharma, V. (2019). Impact of Selfitis on Psychosocial Health Viz; Body Image and Self-Esteem among Adolescents in a Selected School of New Delhi. *International Journal of Nursing & Midwifery Research* (E-ISSN: 2455-9318), 6(2 & 3), Article 2 & 3.
- Griffiths, M. (2019, May 5). *The psychology of the selfie | What motivates individuals to take selfies?* Psychology Today. <https://www.psychologytoday.com/us/blog/in-excess/201905/the-psychology-the-selfie>
- Gupta, M., Jassi, A., & Krebs, G. (2023). The association between social media use and body dysmorphic symptoms in young people. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1231801>
- Howe, S. (2023, April 4). *Social media statistics in the Philippines [Updated 2023]*. Meltwater. <https://www.meltwater.com/en/blog/social-media-statistics-philippines>
- Johnson, B. (2001). Toward a new classification of nonexperimental quantitative research. *Educational Researcher*, 30(2), 3–13. <https://doi.org/10.3102/0013189X030002003>
- Kela, R. K., Khan, N., Saraswat, R., & Amin, B. (2017). Selfie: Enjoyment or addiction? *Journal of Medical Science and Clinical Research*, 05(01), 15836–15840. <https://doi.org/10.18535/jmscr/v5i1.96>
- Kelly, S. (2010) Qualitative interviewing techniques and styles. In: Bourgeault I, Dingwall R and de Vries R (eds) *The Sage Handbook of Qualitative Methods in Health Research*. Thousand Oaks: Sage Publications
- Khan, M., & Imran, I. (2019). Dark triad personality, body concern, emotional intelligence and selfitis behavior among students. *Journal of Research and Reviews in Social Sciences Pakistan*, 2(2), 424-439.
- Khanna, A., & Sharma, M. (2017). Selfie use: The implications for psychopathology expression of body dysmorphic disorder. *Industrial Psychiatry Journal*, 26(1), 106. https://doi.org/10.4103/ipj.ipj_58_17
- Lev-Ari, L. (2017). The well-rounded body image: The Dresdner Körperbildfragebogen DKB-35. *The Israel Journal of Psychiatry and Related Sciences* 54(3).
- Lev-Ari, L., Zohar, A. H., & Bachner-Melman, R. (2020). Enjoying your body: The psychometric properties of an English version of the Dresden Body Image Questionnaire. *Australian Journal of Psychology*, 72(3), 267–275. <https://doi.org/10.1111/ajpy.12284>
- Lin, C. Y., Lin, C. K., Imani, V., Griffiths, M. D., & Pakpour, A. H. (2019). Evaluation of the Selfitis Behavior Scale across two Persian-speaking countries, Iran and Afghanistan: Advanced psychometric testing in a large-scale sample. *International Journal of Mental Health and Addiction*, 18(1), 222–235. <https://doi.org/10.1007/s11469-019-00124-y>
- Lonergan, A., Bussey, K., Mond, J., Brown, O., Griffiths, S., Murray, S. B., & Mitchison, D. (2019). Me, my selfie, and I: The relationship between editing and posting selfies and body dissatisfaction in men and women. *Body Image*, pp. 28, 39–43. <https://doi.org/10.1016/j.bodyim.2018.12.001>

- McCallum, M., Ho, A. S., May, C. N., Behr, H., Mitchell, E. S., & Michealides, A. (2021). Body positivity and self-compassion on a publicly available behavior change weight management program. *International Journal of Environmental Research and Public Health*, *18*(24), 13358. <https://doi.org/10.3390/ijerph182413358>
- McLean, S. A., Paxton, S. J., Wertheim, E. H., & Masters, J. (2015). Photoshopping the selfie: Self-photo editing and photo investment are associated with body dissatisfaction in adolescent girls. *International Journal of Eating Disorders*, *48*(8), 1132–1140. <https://doi.org/10.1002/eat.22449>
- McLean, S. A., Jarman, H. K., & Rodgers, R. F. (2022). How do "selfies" impact adolescents' well-being and body confidence? A narrative review. *Psychology Research and Behavior Management*, *Volume 12*, pp. 513–521. <https://doi.org/10.2147/PRBM.S177834>
- Mills, J. S., Musto, S., Williams, L., & Tiggemann, M. (2018). "Selfie" harm: Effects on mood and body image in young women. *Body Image*, *27*, 86–92. <https://doi.org/10.1016/j.bodyim.2018.08.007>
- Monacis, L., Griffiths, M. D., Limone, P., Sinatra, M., & Servidio, R. (2020). Selfitis behavior: Assessing the Italian version of the Selfitis Behavior Scale and its mediating role in the relationship of dark traits with social media addiction. *International Journal of Environmental Research and Public Health*, *17*(16), 5738. <https://doi.org/10.3390/ijerph17165738>
- Moumina, H. A., Altamimi, L. D., Alshawi, S. M., & Kattan, W. (2022). Attitudes towards selfie-taking and its relation to body dysmorphic disorder among pre-clinical medical students. *Journal of Community Health Management*, *9*(2), 60–66. <https://doi.org/10.18231/j.jchm.2022.013>
- Murray, D. C. (2015). Notes to self: The visual culture of selfies in the age of social media. *Consumption Markets & Culture*, *18*(6), 490–516. <https://doi.org/10.1080/10253866.2015.1052967>
- Murray, W. (2021, September 27). Can we blame filters and "Instagram face" for body dysmorphic disorder? *Thriveworks*. <https://thriveworks.com/blog/filters-instagram-face-body-dysmorphic-disorder/>
- Neziroglu, F., & Cash, T. F. (2008). Body dysmorphic disorder: Causes, characteristics, and clinical treatments. *Body Image*, *5*(1), 1–2. <https://doi.org/10.1016/j.bodyim.2008.03.001>
- Oosthuizen, P., Lambert, T., & Castle, D. J. (1998). Dysmorphic concern: Prevalence and associations with clinical variables. *Australian and New Zealand Journal of Psychiatry*, *32*(1), 129–132. <https://doi.org/10.3109/00048679809062719>
- Oppong, D., Adjaottor, E. S., Addo, F., Nyaledzigbor, W., Ofori-Amanfo, A. S., Chen, H., & Ahorsu, D. K. (2022). The mediating role of selfitis in the associations between self-esteem, problematic social media use, problematic smartphone use, body-self appearance, and psychological distress among young Ghanaian adults. *Healthcare*, *10*(12), 2500. <https://doi.org/10.3390/healthcare10122500>
- Peat, C. M., Peyerl, N. L., & Muehlenkamp, J. J. (2008). Body image and eating disorders in older adults: A review. *The Journal of General Psychology*, *135*(4), 343–358. <https://doi.org/10.3200/genp.135.4.343-358>
- Phillips, K. A. (Ed.). (2017). *Body Dysmorphic Disorder* (Vol. 1). Oxford University Press. <https://doi.org/10.1093/med/9780190254131.001.0001>
- Phillips, K. A., & Kelly, M. M. (2021). Body dysmorphic disorder: Clinical overview and relationship to obsessive-compulsive disorder. *FOCUS*, *19*(4), 413–419. <https://doi.org/10.1176/appi.focus.20210012>
- Pöhlmann, K., Roth, M., Brähler, E., & Joraschky, P. (2013). Der Dresdner Körperbildfragebogen (DKB-35): Validierung auf der basis einer klinischen stichprobe. *Psychotherapie Psychosomatik Medizinische Psychologie*, *64*(03/04), 93–100. <https://doi.org/10.1055/s-0033-1351276>
- Quittkat, H. L., Hartmann, A. S., Düsing, R., Buhlmann, U., & Vocks, S. (2019). Body dissatisfaction, importance of appearance, and body appreciation in men and women over the lifespan. *Frontiers in Psychiatry*, *10*(864). <https://doi.org/10.3389/fpsy.2019.00864>
- Ramos, P., Moreno-Maldonado, C., Moreno, C., & Rivera, F. F. (2019). The role of body image in internalizing mental health problems in Spanish adolescents: An analysis according to sex, age, and socioeconomic status. *Frontiers in Psychology*, *10*. <https://doi.org/10.3389/fpsyg.2019.01952>
- Raosoft. (2004). Sample Size Calculator. <http://www.raosoft.com/samplesize.html>
- Reyes, Marc Eric. (2021). Me, Myself, & I: Narcissistic Personality Trait and Selfie Behavior Among Selected Filipinos. *North American Journal of Psychology*. *23*. 255-272.
- Roosen, K. M., & Mills, J. S. (2014). Body image, overview. *Encyclopedia of Critical Psychology*, pp.

179–185. https://doi.org/10.1007/978-1-4614-5583-7_403

Rozzell, K. N., Carter, C., Convertino, A. D., Gonzales, M., & Blashill, A. J. (2020). The Dysmorphic Concern Questionnaire: Measurement invariance by gender and race/ethnicity among sexual minority adults. *Body Image*, 35, 201–206. <https://doi.org/10.1016/j.bodyim.2020.08.010>

Schieber, K., Kollei, I., De Zwaan, M., & Martin, A. (2018). The Dysmorphic Concern Questionnaire in the German general population: Psychometric properties and normative data. *Aesthetic Plastic Surgery*, 42(5), 1412–1420. <https://doi.org/10.1007/s00266-018-1183-1>

Schneider, S. C., Mond, J., Turner, C. M., & Hudson, J. L. (2019). Sex differences in the presentation of body dysmorphic disorder in a community sample of adolescents. *Journal of Clinical Child & Adolescent Psychology*, 48(3), 516–528. <https://doi.org/10.1080/15374416.2017.1321001>

Schiminski, L. (2023). Perfection has been cancelled. Reality is loading...: A study on the authentic representation of body acceptance among female influencers on Instagram / Louisa Schiminski. <https://netlibrary.aau.at/obvuklhs/8503185>

Shome, D., Vadera, S., Male, S. R., & Kapoor, R. (2019). Does taking selfies lead to increased desire to undergo cosmetic surgery? *Journal of Cosmetic Dermatology*, 19(8), 2025–2032. <https://doi.org/10.1111/jocd.13267>

Sorokowski, P., Sorokowska, A., Oleszkiewicz, A., Frackowiak, T., Huk, A., & Pisanski, K. (2015). Self-posting behaviors are associated with narcissism among men. *Personality and Individual Differences*, 85, 123–127. <https://doi.org/10.1016/j.paid.2015.05.004>

Stangier, U., Janich, C., Adam-Schwebe, S., Berger, P., & Wolter, M. W. (2003). Screening for body dysmorphic disorder in dermatological outpatients. *Dermatology + Psychosomatics*, 4(2), 66–71. <https://doi.org/10.1159/000072194>

Statista Research Department. (2022, November 17). Social media in the Philippines - statistics & facts. *Statista*. <https://www.statista.com/topics/6759/social-media-usage-in-the-philippines/>

Stefanone, M. A., Yue, Z., & Toh, Z. (2019). A social cognitive approach to traditional media content and social media use: Selfie-related behavior as competitive strategy. *New Media & Society*, 21(2), 317–335. <https://doi.org/10.1177/1461444818795488>

Steinsbekk, S., Wichstrøm, L., Stenseng, F., Nesi, J., Hygen, B. W., & Skalická, V. (2021). The impact of social media use on appearance self-esteem from childhood to adolescence – A 3-wave community study. *Computers in Human Behavior*, 114, 106528. <https://doi.org/10.1016/j.chb.2020.106528>

Taqi, A. M., Shaikh, M., Gowani, S. A., Shahid, F., Khan, A., Tayyeb, S. M., Satti, M., Vaqar, T., Shahid, S., Shamsi, A., Ganatra, H. A., & Naqvi, H. A. (2008). Body dysmorphic disorder: Gender differences and prevalence in a Pakistani medical student population. *BMC Psychiatry*, 8(1), 20. <https://doi.org/10.1186/1471-244X-8-20>

Wilhelm, S. (2006) *Feeling Good about the Way You Look: A Program for Overcoming Body Image Problems*. Guilford press.

Wilhelm, S., Phillips, K. A., & Steketee, G. (2012). *Cognitive-Behavioral Therapy for Body Dysmorphic Disorder: A Treatment Manual*. The Guilford Press.

World Bank. (2022). *Population ages 15-64, total—Philippines*. World Bank Group. <https://data.worldbank.org/indicator/SP.POP.1564.TO?locations=PH>

Zangirolami-Raimundo, J., De Oliveira Echeimberg, J., & Leone, C. (2018). Research methodology topics: Cross-sectional studies. *Journal of Human Growth and Development*, 28(3), 356–360. <https://doi.org/10.7322/jhgd.152198>

Table 1. Mean, Standard Deviation, and Correlations between the Study Variables

Variables	Mean	SD	1	2	3	4	5
1. Assigned sex at birth	-	-	-				
2. Age	-	-	-	-			
3. Body Acceptance	19.8	4.59	-.078*	.292**	-		
4. Body Dysmorphia Symptoms	4.01	3.12	-0.03	-.444**	-.531**	-	
5. Selfitis	55.8	16.2	0.006	-0.017	0.041	.093*	-

Note. ** Correlation is significant at the 0.01 level (1-tailed). * Correlation is significant at the 0.05 level (1-tailed).

Table 2. Partial Correlation of the Study Variables

Variables	1	2	3
1. Body Acceptance	-		
2. Body Dysmorphia Symptoms	-.468***	-	
3. Selfitis	.050	.095*	-

Note. Controlling for 'age' and 'assigned sex at birth'; * $p < .05$, ** $p < .01$, *** $p < .001$

Table 3. Results of the Mediation Analysis

Effect	Path	β	SE	95% CI		z	p
				Lower	Upper		
Total	Body acceptance → Selfitis	0.05775	0.1661	-0.1219	0.5293	1.226	0.220
Indirect	Body acceptance → Body Dysmorphia symptoms → Selfitis	-0.07064	0.0879	-0.4214	-0.0770	-2.836	0.005
Direct	Body acceptance → Selfitis	0.12839	0.1853	0.0896	0.8161	2.443	0.015

Note. Confidence intervals computed with method: Standard (Delta method). Betas are completely standardized effect sizes.

Table 4. Moderation Simple Slope Estimates

	β	SE	t	p
Average	0.542	0.190	2.852	0.005
Low (-1SD)	0.190	0.218	0.869	0.385
High (+1SD)	0.895	0.273	3.274	0.001

Note. Shows the effect of the predictor (Body Acceptance) on the dependent variable (Selfitis) at different levels of the moderator (Body Dysmorphia Symptoms)