

Bachelor Thesis

Social Media Use and Body Image in Young Adults Mediated by Social Comparison

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Abstract

With social media's rapid rise in popularity over the last decade, researchers have begun to explore the association between social media use and numerous psychological well-being variables. Body image has become a variable of interest due to social media's resemblance to conventional media and the unique comparisons that may occur on the online platforms. However, prior research has yielded inconsistent results. Therefore, this study aimed to investigate the relationship between social media and body image and whether social comparison could mediate the association. During the research, a cross-sectional survey design was employed. The sample, consisting of 114 young adults, filled out the body image questionnaire *Centre for Appearance Research Valence Scale (CARVAL)* (Moss & Rosser, 2012) and the social comparison questionnaire *Iowa-Netherlands Comparison Orientation (INCOM)* (Schneider & Schupp, 2011). In addition, participants had to indicate their daily cumulative social media screen time. Two key findings can be highlighted. First, a significant relationship between social media use and body image was found ($r=-.2$). The correlation was negative, indicating that higher screen time is associated with a lowered body image. Secondly, social comparison did not mediate the relationship in this study ($E=-0.04$, 95% C.I. [-0.15, 0.02]). That high social media use is connected to decreased body image was anticipated due to similarities between new and traditional media. Furthermore, a possible explanation for the fact that social comparison was not a significant mediator may be that the current study did not differentiate between negative and positive upwards social comparisons. Furthermore, it is recommended to conduct longitudinal studies to obtain richer results. All in all, this study serves as a step toward relating the concepts of body image, social media, and social comparisons and can stimulate further research.

Keywords: body image, social media, social comparison, young adults, mediation analysis

Introduction

Body image is one of the most influential contributors to well-being (Mental Health Foundation, 2019). A positive body image leads to improved self-esteem and holistic well-being (Grogan, 2021; Mental Health Foundation, 2019). However, acute body image dissatisfaction has a high prevalence; a survey from 2013 concluded that 57% of females and 26% of males were dissatisfied with their optical presentation (Government Equalities Office, 2013). This is a major problem because body dissatisfaction is a significant risk factor for developing and sustaining eating disorders in men and women (Dakanalis et al., 2015; Furnham et al., 2002; Stice et al., 2017). Moreover, those dissatisfied with their bodies are more likely to engage in dangerous behaviors such as drastic diets and intense exercise regimes. Also, ways of thinking are being influenced. The dissatisfied employ significantly lower self-esteem scores (Furnham et al., 2002; Venegas Ayala & González Ramírez, 2018) and have an immensely increased risk of experiencing anxiety, depression, and social isolation (Franchina, & Coco, 2018; Wilson et al., 2013). Social media has the power to influence the evaluation process of one's body image (Grogan, 2021). Currently, 90% of young adults aged 18 to 29 are active social media users (Perrin, 2015). Therefore, many young adults have their body image influenced by social media; whether the influence is positive or negative needs to be determined (Valkenburg et al., 2022).

Generally, *body image* illustrates how one perceives their body. The concept encompasses both the mental picture one develops about body size and proportion as well as the emotions one has toward one's body (Cash, 2012; Furnham et al., 2002). In other words, body image is a combination of both perceptual and emotional components (Cash, 2012; Grogan, 2021). In addition, the perception of one's body is dynamic and subject to fluctuations in how someone perceives one's physique (Grogan, 2021). Furthermore, the body image that an individual fosters is never a true reflection of their physical appearance. Instead, it is a self-constructed view of one's body shaped by self-evaluations (Grogan, 2021). The environment, Interactions, and social media influence how people make those self-assessments (Venegas Ayala & González Ramírez, 2018).

If this mental assessment is adverse, one has developed *body image dissatisfaction*. The dissatisfaction can occur for both genders and develops if individuals evaluate their own bodies based on dysfunctional and negative attitudes and emotions concerning their physique (Cash & Brown, 1987; Grogan, 2021). Negative assessments commonly concern size, muscle mass, body weight, and overall body shape (Grogan, 2021). Furthermore, an estimated 13

percent of adults have had suicidal thoughts due to concerns about their body image (Mental Health Foundation, 2019). Thus, negative body image has an immense mental health impact.

One's body image can be influenced by social media use which has become a daily activity for its consumers, who spend numerous hours posting and browsing on different platforms (Saiphoo & Vahedi, 2019). *Social media* is defined as computer-mediated technology that includes platforms such as Facebook, Twitter, and Instagram, which allow users to make and share visual or textual content (Obar & Wildman, 2015; Rodgers & Melioli, 2015; Saiphoo & Vahedi, 2019). Nowadays, social media has become an essential part of daily life. A study from 2021 showed that there are a total of 4.2 billion active social media users around the globe (Statista, 2021). Furthermore, experts expect this number to continue yearly growth (Hootsuite, 2019). However, social media can have positive and negative consequences for its users. One example of positive contribution is providing the chance to connect with others and forming communities. Nevertheless, social media also fosters risks such as bullying and unfavorable social comparisons (Martin et al., 2018). Even though social media is excessively used, usage with this intensity is a new phenomenon that still lacks research (Valkenburg et al., 2022).

Compared to new media, the health impact of traditional media forms has been investigated thoroughly. Exposure to traditional media forms such as television, magazines, music videos, and more have been proven to cause body image dissatisfaction among consumers of both genders (Franchina, & Coco, 2018; Saiphoo & Vahedi, 2019). In addition, high traditional media use influences the likelihood of eating disorders and self-esteem issues (Strasburger et al., 2012). However, television, magazines, and other conventional mass media forms are not attracting young consumers anymore. Instead, engaging with media over mobile devices has become essential for adolescents and needs to be considered (Hootsuite, 2019; Perloff, 2014). Social media content is so attractive since it is available anywhere at any time, allowing more opportunities for body comparisons than traditional media offers (Perloff, 2014).

An essential difference between traditional and social media is interactivity (Saiphoo & Vahedi, 2019). Not only celebrities are using it, but also peers. While celebrities can also influence body perceptions, research suggests that peers are more relevant for body image comparisons. Celebrities also are only passively engaging with users, while peers can actively engage with one another (Hogue & Mills, 2019; Perloff, 2014). However, individuals do not represent themselves realistically and can portray an idealized version of themselves. This can be achieved by only selecting particular pictures and even filtering and manipulating them in

some instances (Cohen et al., 2018; Fardouly & Vartanian, 2016). For example, one can use applications to slim one's body and reshape the face (Kleemans et al., 2016). This selective sharing on new social media platforms is comparable to traditional media, which is known to be selective about what can be published (Saiphoo & Vahedi, 2019).

One example of selective sharing is that only certain body types get promoted by the masses. In Western society, women and men strive for different body types. This is reflected in the content shared on social networking sites (Grogan, 2021). While women like to achieve a thin body, the male ideal consists of a muscular and broad physique (Furnham et al., 2002; Grogan, 2021; Holmqvist Gattario, 2013, Rodgers & Melioli, 2016, Salusso-Deonier et al., 1993). More specifically, the male beauty standard is defined by a V-shaped figure with broad shoulders and large biceps, and males predominantly use fitness to obtain the ideal. Women utilize diets as a tactic to achieve a slender body (Badmin, & Sneade, 2002; Furnham et al., 2002; Grogan, 2021; Holmqvist Gattario, 2013; Salusso-Deonier et al., 1993).

Body types are associated with stigmas. Women's thinness is idolized in society and associated with contentment, achievement, and social acceptance. Conversely, being overweight is seen as an indication of laziness and a lack of self-control. (Grogan, 2021; Furnham et al., 2002). Furthermore, individuals often make wrong judgments about their appearance; Men might judge themselves as underweight when their weight is average, and women are more prone to perceive themselves as overweight even though they are not according to the Body Mass Index (Furnham et al., 2002; Venegas Ayala, & González Ramírez, 2018). In media, women are portrayed as abnormally slim; fashion models are thinner than 98% of US women (Grogan, 2021). Furthermore, the emergence of picture manipulation makes the ideals even more unrealistic (Fardouly & Vartanian, 2016; Grogan, 2021). The picture manipulation applies to both new and old media. Even though the ideal body is impossible to reach for the majority, the consumers interpret the ideals as real and attainable (Franchina & Coco, 2018; Hogue & Mills, 2019; Rodgers & Melioli, 2016; Saiphoo & Vahedi, 2019). Both traditional and new media hold power to determine what is socially acceptable and which body is desirable (Grogan, 2021). Therefore, social media determines beauty ideals.

Many psychological theories aim to explain how media influences body image and the previously mentioned ideals. The theory that is relevant is the *social comparison theory* based on the work of Festinger (1954). Festinger's approach must be explored since social media offers its users an abundant number of possibilities to compare themselves (Vogel et al., 2014). The theory describes that humans desire objective evaluations of themselves

(Festinger, 1954). However, since it is hard to evaluate oneself directly, individuals make self-evaluations dependent on comparisons with others (Grogan, 2021; Lewallen & Behm-Morawitz, 2016; Meier & Johnson, 2022).

In general, there are two types of comparisons. The first type is referred to as upward comparison and explains an unfavorable comparison on an attribute where the other one scores higher than oneself. The second type is a favorable comparison, also named downward comparison. In this instance, people perceive themselves as scoring higher than the other on a targeted attribute (Hogue & Mills, 2019; Lewallen & Behm-Morawitz, 2016). This evaluation process is mainly made unconsciously, meaning that individuals who are not necessarily looking for any comparisons make them automatically and are unaware they did so (Grogan, 2021; Hogue & Mills, 2019). Even though upward comparisons can be beneficial if they are interpreted as an inspiration to become closer to the compared, people are more often left feeling inadequate. Opposingly, downward comparisons often heighten self-esteem and mood (Vogel et al., 2014).

Most importantly, social comparison theory can also be linked to media. People can use images projected by the media as the standard for their comparison. (Cohen et al., 2018; Grogan, 2021; Hogue & Mills, 2019) Moreover, social comparison with attractive peers worsens self-perception more greatly than comparisons with celebrities. Individuals are not identifying celebrities as the comparison group since they are perceived as less similar. Further, self-comparisons with peers are processed more deeply and have a more substantial psychological impact (Perloff, 2014; Scully et al., 2020). The brain, however, is incapable of discerning whether peer pictures have been altered (Grogan, 2021). Thus, the problem with online representation is that people can strategically construct an online persona that only empathizes desirable traits (Saiphoo & Vahedi, 2019). Nevertheless, in real life, comparisons do not allow that degree of contemplation and flexibility (Cohen et al., 2018). In conclusion, individuals seem to compare their offline selves to other people's carefully constructed online selves (Vogel et al., 2014). This can cause decreased body satisfaction (Cohen et al., 2018; Saiphoo & Vahedi, 2019).

However, social media influences are very complex, and body image has a very multifaceted nature (Perloff, 2014). Therefore, it seems reasonable to assume that exposure to social media has not a simple and direct impact and one has to assume other processes need to be considered as well (Scully et al., 2020). One very influential theory is *media internalization*. Media internalization is a process where consumers commend the media-promoted body ideals and consequently adopt them as their standard (Cohen et al., 2018;

Franchina & Coco, 2018; Knauss et al., 2008). The individual who believes in these ideals compares themselves with the media models. This leads to a cognitive discrepancy between their actual appearance and their internalized ideals. The comparison results in body dissatisfaction (Furnham et al., 2002; Grogan, 2021). Overall, individuals internalize the ideals and construct based on that the social definition of attractiveness (Franchina, & Coco, 2018; Knauss et al., 2008).

Since there is not enough research regarding the influence of social media use on body image (Valkenburg et al., 2022), and even less concerning the possibility of social comparison as a mediator (Cohen et al., 2018), an online survey was conducted to examine those relationships further. This choice was reached because there is much ambiguity between current research findings. Some studies, such as the work of Manago et al. (2014), establish a connection between high social media use and improved body image. While other researchers, such as Cohen et al. (2017), could not establish any links between body image and social media use. Nevertheless, assuming that body dissatisfaction is related to high social media use makes sense since most online platforms heavily rely on physical appearance (Rodgers & Melioli, 2015).

In conclusion, body image is an essential well-being variable. The absence of a healthy relationship with one's body is dangerous and characterized by the risk of developing and sustaining eating disorders (Dakanalis et al., 2015), having restricted diets, low self-esteem (Venegas Ayala & González Ramírez, 2018), and even in some instances suicidal thoughts (Mental Health Foundation, 2019). Social media has the power to influence the evaluation process of one's body image and is actively used by 90% of young adults (Perrin, 2015). Some researchers believe that the social comparison theory might be able to explain how social media influences body image (e.g. Vogel et al., 2014) and is therefore tested as a mediator (Figure 1). Furthermore, the target group of this study will be young adults since they are the most engaged social media users and therefore affected the most (Pew Research Center, 2021).

Hence, the study investigates the relationship between social media use and body image. Also, social comparison will be tested as a mediating variable. To reach this aim, the following research question (RQ) and hypotheses (H) were formulated:

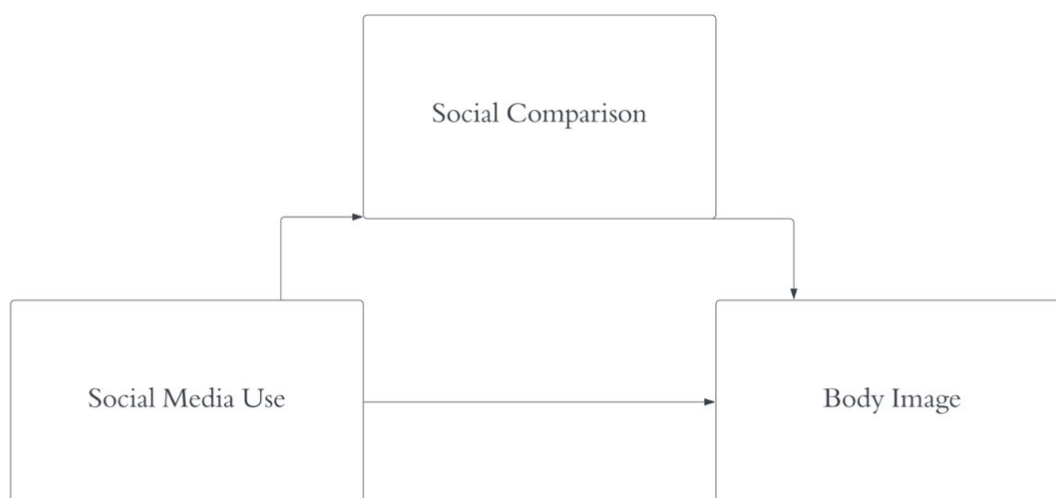
RQ 1: Is the intensity of social media use of young adults related to body image?

H:1 Young adults with a high social media use will have lower body image scores.

H2: Social comparison mediates the relationship between social media use and body image.

Figure 1

Conceptual model of expected mediation effect



Method

Design

A correlational research design was employed to examine the hypothesis. The cross-sectional survey was part of a larger study investigating the relationship between social media and well-being. Relevant to this paper were the independent variable social media use with two levels, high and low use. Furthermore, the dependent variable was the score on the body image scale. Lastly, social comparison was the mediating variable in this study design.

Participants

All participants were recruited through the application *SONA System* and received 0.25 study credits as compensation for their participation. For some university programs, the students need to collect SONA points to graduate with the sufficient amount of credits. Moreover, the only inclusion requirements were that the participants must be at least 18 years old and proficient in English.

The sample consisted of 114 participants. The mean age of the participants was 21.06 years ($SD=1.92$), and 77.2% of those were female, while only 21.9% were male. Out of the sample, 73.7% were German, 17.5% Dutch, and 8.8% had a different nationality. 90.4% of the participants achieved a high school diploma, 7.9% finished a Bachelor's degree, and 1.8% achieved their Master's degree. Finally, 63.2% were single, 33.3% were in a partnership, and 2.6% were married (Table 1).

Table 1*Means and Frequencies of Demographic Variables*

Participant characteristic	Frequencies		Descriptive Statistics	
	<i>n</i>	%	<i>M</i>	<i>SD</i>
Age			21.06	1.92
Gender				
Female	88	77.2		
Male	25	21.9		
Prefer not to say	1	0.9		
Nationality				
German	84	73.7		
Dutch	20	17.5		
Other	10	8.8		
Achieved education level				
Highschool	103	90.4		
Bachelor's degree	9	7.9		
Master's degree	2	1.8		
Marital status				
Single	72	63.2		

In a partnership	38	33.3
Married	3	2.6
Prefer not to say	1	0.9

Note. $N = 114$

Materials and Measures

The online platform *Qualtrics* was employed to create the online questionnaire. First, an informed consent form was created (Appendix A). Secondly, demographic questions of the survey included age, nationality, gender, education level, marital status, and the social media platforms used by the participant. Third, questionnaires about body image and social comparison were included.

Screen Time

Further, participants were asked about their social media screen time. Instructions for IOS and Android were provided, elaborating step by step on how the participants can retrieve the social media screen time from their mobile phones (Appendix B). Also, the participants were asked to indicate the screen time in minutes instead of hours, to enhance preciseness. After the data was collected, the variable screen time was divided into two categories: low and high. The division was set from 0-180 minutes a day and 181 and more minutes daily. The reason for the segmentation at this point is that passing the three hours is a threshold that is associated with increased health risks (Davies et al., 2012).

Body image: CARVAL

Based on the systematic review of body image measures by Kling et al. (2019), the Centre for Appearance Research Valence Scale (*CARVAL*) was chosen as the most appropriate scale to measure body image in this study. The reason for that is that this questionnaire not only measures body dissatisfaction but instead also measures positive attitudes toward one's body. Moreover, out of the questionnaires that have a more holistic approach, the *CARVAL* has the best reliability $\alpha = .93$ and validity (Moss & Rosser, 2012). The *CARVAL* includes eight items and measures appearance valence and body dissatisfaction/ satisfaction. The response categories are implemented through a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). A high score indicates a

positive body image, while a low score refers to body image dissatisfaction (Moss & Rosser, 2012).

Social comparison: INCOM

Through the Iowa-Netherlands Comparison Orientation Measure (*INCOM*), the tendency of a person to conduct social comparison is measured. This questionnaire was successfully tested in Western society and was found reliable in German and Dutch populations. Instead of the long version of the INCOM, which is entertaining 11 items, the shortened version was picked due to better completion rates. This study used the shortened version with six items since it also showed excellent reliability ($\alpha = .9$) (Gerson et al., 2017). The participant had to indicate on a 5-point Likert scale how much they agreed or disagreed with each statement. Furthermore, an example of a statement is “I always like to know what others in a similar situation would do.” (Schneider & Schupp, 2011). A high score indicates intense social comparison, and a low score corresponds to low social comparison tendencies (Schneider & Schupp, 2011).

Procedure

The study gained approval from the BMS Ethics Committee of the University of Twente. The participants were recruited through SONA and clicked on a link redirecting them to the online platform Qualtrics. The study was made available from 03-04-2022 to 01-05-2022. First, the participant was asked to read the consent form stating their rights and the aim of the study. After giving informed consent, the participant was allowed to proceed with the survey. The duration of the survey was approximately 15 minutes. After the participation, the individual was thanked, and the researcher’s emails were provided as a contact option if any questions arose.

Data Analysis

The IBM Statistical Package for the Social Sciences (SPSS) Version 28 was utilized to analyze the data. Before the analysis could begin, it was accounted for that the data was entered correctly, and missing and non-valid values were excluded. First, descriptive analysis was implemented. Thus, the means, corresponding standard deviations, and frequencies were calculated for all variables. Furthermore, the data's normality was analyzed using the Shapiro Wilk test. In accordance with the Shapiro Wilk test, the body image scores were not distributed normally. Moreover, the screen time variable was split into the categories of high

and low screen time. After that, the nonparametric correlation between screen time and body image was captured by the Spearman's Rho coefficient. Lastly, a mediation analysis was conducted to see if social comparison mediates the relationship between screen time and body image scores. To perform the mediation analysis, the extension PROCESS Version 4.1 was added to SPSS. To account for the not normally distributed data, Bootstrap Confidence intervals were used to assess the mediation effect. This was implemented since it makes the data more robust and increases the accuracy in small samples. If applied, the data gets resampled into many smaller samples, which can then fulfill the normality assumption (Hayes, 2017). In this case, 5000 bootstrap resamples were used. Only when zero is not included within the upper and lower bounds of the confidence interval the effect of the mediator is significant (Hayes, 2017).

Results

A total of 144 participants were recruited; out of those, 30 had to be excluded due to missing values or non-valid answers. Non-valid answers correspond to not indicating the social media screen time in minutes but instead in hours. Also, if the screen time was impossibly high, perhaps the weekly screen time instead of the daily, the participant was excluded for a non-valid answer. Thus, in the end, 114 participants prevailed in the statistical analysis. The mean social media screen time of those participants was 205.78 minutes a day ($SD = 127.6$). Furthermore, the category of screen time was divided into 180 or fewer minutes and 180 and more minutes of social media time a day. Moreover, 51.8% of the participants fell in the lower social media category, while 48.2% were in the high social media use category. The mean body image score was 3.96 ($SD=1.04$), and the mean social comparison score rested at 3.51 ($SD=0.68$) (Table 2). The Shapiro Wilk test was significant; therefore, the data for the variable body image is not normally distributed ($W(119)=.96, p = .01$).

Table 2

Means or Frequencies

Variable	Frequencies		Descriptive Statistics	
	<i>n</i>	%	<i>M</i>	<i>SD</i>
Daily screen time on social media in minutes			205.78	127.6

Spending 180 minutes or less on social media	59	51.8		
Spending 181 minutes or more on social media	55	48.2		
Body image ^a			3.96	1.04
Social comparison ^b			3.51	0.68

Note. $N = 114$

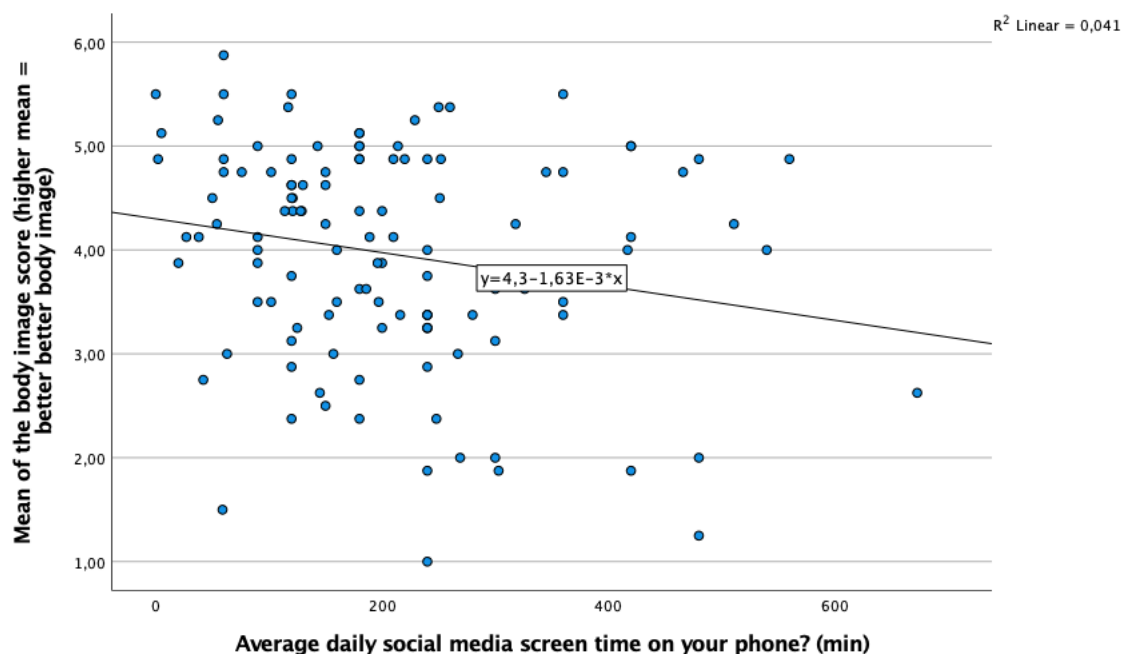
^a scale min = 1 max = 6

^b scale min = 1 max = 5

The Spearman's rho correlation coefficient was used to investigate the relationship between screen time and body image. Moreover, a negative and significant correlation was found ($r = -.2$; $p = .031$). Because the high social media users had a significantly lower body image score than low social media users, hypothesis 1 can be accepted (Figure 2).

Figure 2

Scatterplot Depicting the Correlation between Body image and Screen Time

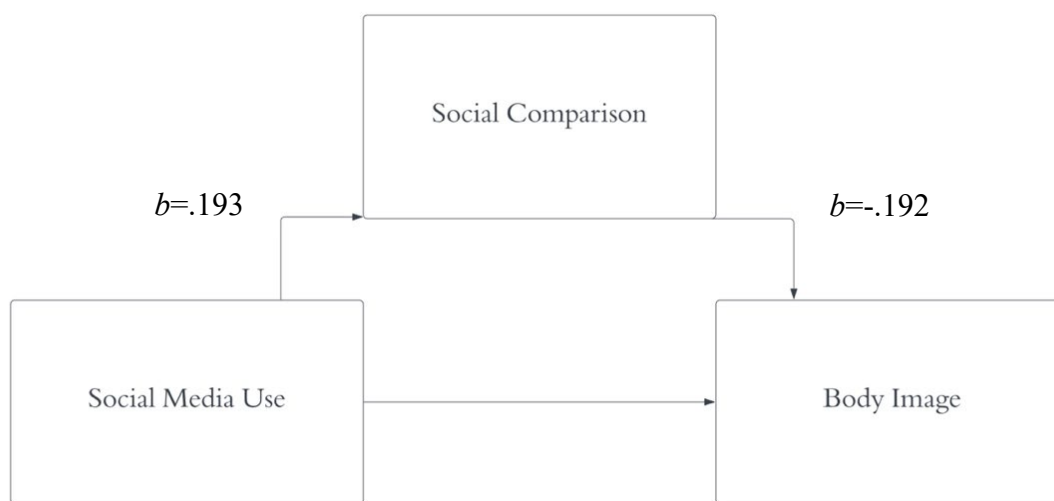


Next, it was examined whether social comparison mediated the relationship between the independent variable screen time and the dependent variable body image. The overall

model for the mediation was not found to be statistically significant ($E = -0.04$, 95% C.I. [-0.15, 0.02]). Further, the direct relationship between social media use and social comparison was not found to be significant ($b = .193$; $p = .129$). Further, the association between social comparison and body image was also not significant ($b = -.192$; $p = .176$) (Figure 3). To conclude, hypothesis 2 must be rejected. This means that social comparison cannot explain the existing relationship between social media use and body image.

Figure 3

Mediation model including values



Discussion

The purpose of the study was to investigate the relationship between social media use and body image in a sample of young adults. The aim was to determine whether high social media usage is associated with a lower body image score. Additionally, it was examined whether the relationship could be mediated by social comparison.

The findings of this study can be summarized into two key conclusions. First, the results indicated a negative and significant relationship between social media screen time and body image. Young adults with high social media use showed significantly lower body image scores than individuals with low social media use. This finding was expected due to social media's similarities with traditional media (Franchina, & Coco, 2018; Saiphoo & Vahedi, 2019). Furthermore, a strong causal relationship between traditional media and body image dissatisfaction is widely accepted (Franchina, & Coco, 2018; Grogan, 2021; Saiphoo & Vahedi, 2019). Besides, some studies, such as Perloff (2014), found a relationship linking

negative body image to increased social media use, which is consistent with the research at hand. The finding of this study may be considered as further validation of the above-mentioned research.

Secondly, social comparison did not mediate the relationship between social media use and body image in this study. This finding is inconsistent with some researchers, such as Haferkamp and Krämer (2011), who found that the relationship between body image and looking at social media profiles was mediated by social comparison. In addition, Lee et al. (2019) concluded that high social networking site use and physical perception were mediated by social comparison.

A possible explanation for the insignificant finding could be that the type of social comparison needs to be more specified in the questionnaire. Generally, an upward comparison, which is the more frequent type of comparison occurring online (Vogel et al., 2014), describes the instance when others perform better than oneself (Hogue & Mills, 2019; Lewallen & Behm-Morawitz, 2016). However, upward social comparisons affect individuals differently. Either people feel inadequate since others are looking better (Vogel, 2014), or they feel motivated to do better by seeing their ideals online (Meier et al., 2020; Rieger & Klimmt, 2018). The current study did not differentiate between positive and negative upward comparisons and just requested the general degree of social comparison. This might be the reason the mediation effect was not found to be significant. Studies such as Appel et al. (2016) and De Vries and Kühne (2015) did differentiate between positive and negative upward social comparisons. The researchers established that high Facebook use in young adults was associated with a negative self-image significantly mediated by negative upward social comparisons (Appel et al., 2016; De Vries & Kühne, 2015). Therefore, it may be reasonable to suggest a mediation analysis that only considers negative upward comparisons.

Further, research suggests that individual vulnerability factors need to be incorporated into the model. Since the factors instigate social comparison on social media, they also affect the production of body image dissatisfaction (Dittmar & Howard, 2004; Perloff, 2014). The vulnerability factors that should be controlled for are low self-esteem, media internalization of the thin ideal, and depression, according to Perloff (2014).

Strengths and Limitations

First, some strengths of the study should be considered. The study at hand was one of the first studies to investigate the relationship between social media use and body image with

social comparison as a mediator. Also, the measures for body image and social comparisons were noticed to be very reliable and valid (Gerson et al., 2017; Moss & Rosser, 2012).

Next, a few limitations should be discussed. In general, there is no secure way of measuring screen time yet, so the participants were asked to retrieve the screen time from their phones. Nonetheless, the validity and reliability of this method could be problematic. Since Android users could gather the screen time for their daily use from the settings, IOS system users were asked to manually divide the weekly number to retrieve the daily social media screen time (Appendix B). It is uncertain if the participants were prone to mistakes due to misunderstanding the instructions and miscalculations or if they thought it was too much effort and just estimated the numbers themselves. This might have caused errors in the analysis.

Another limitation is that the study design was cross-sectional, which implicates that each participant gets compared with other participants in one single point of time. However, it was established earlier that body image is not a static concept and can fluctuate (Grogan, 2021). Therefore, only having one point of measurement per participant is not convincing.

The following limitations are regarding the sample. Due to convenience sampling, the gender is unequally distributed: while 77.2% are female, only 21.9% are male participants. Thus, male participants were underrepresented. Also, it was earlier established that men and women strive for different body ideals (Furnham et al., 2002; Grogan, 2021; Holmqvist Gattario, 2013, Rodgers & Melioli, 2016), consequently meaning that there is a gender difference that was not accounted for in the study. Therefore, the results might be fundamentally flawed due to a gender bias (Ruiz-Cantero et al., 2007). Also, other demographic variables such as education and marital status were unequally distributed.

Future research

Some more suggestions can be made for future research. Firstly, in forthcoming research, another design could be used. A longitudinal study design that requires data on numerous points in time would have multiple benefits. First, the data would be richer, and the participants would not only be compared to other participants but also to themselves. To be more concrete, one specific option would be to utilize methods such as experience sampling, which is supposed to be helpful in gaining an understanding of the subjective perception of daily life experiences (Schneider, 2006). Secondly, a cross-sectional survey is not enough to infer causality (Levin, 2006). The measurements are only a snapshot, and different results could have been observed at a different time. Moreover, the observed correlation between

body image and social media could also be reversed. There needs to be testing to determine what variable is the correct predictor variable in the study. Therefore, a longitudinal design is essential to make an assumption about causality (Levin, 2006).

Interestingly, social comparison did not mediate the relationship between body image and social media use. Therefore, it can be suggested that researchers could test the relationship again with a larger sample or test for different mediators in the future. This is necessary since social media and body image are multifaceted, and the relationship is likely to be influenced by a multitude of factors (Perloff, 2014). Literature also suggests that some mediators are only significant while considering vulnerability factors (Dittmar & Howard, 2004; Grogan, 2021; Perloff, 2014). As discussed prior, it may be detrimental to specify what kind of comparisons individuals are making on social media. To differentiate between negative and positive upward social comparisons is suggested.

Another recommendation is to consider how to retrieve the screen time of the participants to make it more reliable. An external measure such as a phone application is more reliable and valid for tracking screen time. In addition, an application would increase the accuracy of the data by eliminating the possibility of typing in a biased estimation or calculating false results (Kristensen et al., 2022).

Further, the current study only captured what social media platforms were used and the cumulative time devoted to social media. Instead, more significance should be placed on the type of social media used. Body image disturbance should be especially connected to visual platforms such as Instagram or Pinterest (Venegas Ayala, & González Ramírez, 2018) due to the visual comparison and internalization processes (Perloff, 2014). Furthermore, it would make sense to focus research on one social media platform at a time since the functions of each platform vary extensively. However, since young adults are likely to use multiple social media platforms simultaneously, the researcher would need to control for the usage of the social media platforms that are not of interest in the study design. That means the irrelevant variables need to be measured and accounted for statistically to eliminate their effect on the relevant variables (Shibata, 1981).

Finally, demographic variables such as gender, relationship status, and education should be distributed equally in future research. In general, while reading literature, it was noticed that research on men and their body image disturbance is still lacking. Many studies that were examined focused only on females and neglected men in their research (e.g., Hogue & Mills, 2019; Kleemans et al., 2016; Perloff, 2014), even though statistics underline that males are also suffering from body image issues (Government Equalities Office, 2013).

Therefore, research should give more attention to men's body image concerns in the future to close the research gap.

Conclusion

This study can be seen as a step toward relating body image and social media despite the abovementioned limitations. The results serve as helpful indicators that this topic deserves further investigation. Also, this study was one of the first studies that consider social comparison as a mediator in this context. In addition, even though the mediation effect did not yield significant results, other research suggests that it may have potential. Moreover, the significant correlation between social media consumption and body image is an additional validation of earlier research linking the two. To conclude, the findings of this study will stimulate further research into connecting the important research fields of body image and social media with mediating variables such as social comparison.

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Appendix A

Informed Consent Form

Dear participant,
social media has gotten increasingly popular in the last few years. Research between social media and well-being showed very mixed findings. Therefore, it is not clear if social media has a positive or negative impact on mental health. The results of this study might contribute to a better understanding of the relationship between social media use and mental health.

This survey assesses your social media use, body image, depressive symptoms, loneliness, mindfulness and social comparison.

For participation in this study, participants are required to be between the ages of 18 and 30 and have proficiency in the English language and access to the Internet.
Filling in the survey will take about 15 minutes.

Please note that this survey will be best displayed on a laptop or computer. Some features may be less compatible for use on a mobile device.

The collected data will be handled confidentially and will only be used for analysis purposes and only for this study. All participation is anonymous.

By clicking the first 'I consent' button below, you confirm that you are fully informed about this study and do not have any further questions.

By clicking the second 'I consent' button, you acknowledge that your participation in the study is voluntary and that you can cancel your participation in this study at any time without needing to provide an explanation.

For any further questions about this study or the way the data is being handled, please contact Viktoria Tiltmann (v.tiltmann@student.utwente.nl).

Thank you in advance!
Kindest regards,

Nina Nordmann
Viktoria Tiltmann
Yannick Gerhards

I am fully informed and do not have any further questions. I give permission that my answers will be handled anonymously and confidentially in the context of this study.

I consent.

I am fully informed and do not have any further questions. I give permission that my answers will be handled anonymously and confidentially in the context of this study.

I consent.

Appendix B

Screen time instructions from the survey

What is your average daily social media screen time on your phone?
Please indicate your answer in minutes.

Instructions IOS:

1. Open the Settings app.
2. Scroll to “screen time”.
3. Check your screen time for social media applications.
4. Divide the weekly score by seven.

Instructions Android:

1. Open Android Settings.
2. Scroll to “Digital Wellbeing and parental controls”.
3. Check your screen time for social media applications.