

The role of Instagram, Narcissism, and Self-Promotion in Impulsive and Conspicuous Buying Behavior: an empirical analysis

WENDEL CARLOS CARVALHO MELO

UNIVERSIDADE FEDERAL DO RIO GRANDE DO NORTE (UFRN)

CICERO EDUARDO DE SOUSA WALTER

INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA DO PIAUÍ (IFPI)

MARCOS HENRIQUE SILVA DE CARVALHO

INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA DO PIAUÍ (IFPI)

MIGUEL EDUARDO MORENO AÑEZ

UNIVERSIDADE FEDERAL DO RIO GRANDE DO NORTE (UFRN)

MANUEL LUÍS AU YONG OLIVEIRA

UNIVERSIDADE DE AVEIRO

Agradecimento à orgão de fomento:

This study was supported in part by the: Universidade Federal do Rio Grande do Norte (UFRN); Instituto Federal do Piauí (IFPI); Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES)

THE ROLE OF INSTAGRAM, NARCISSISM, AND SELF-PROMOTION IN IMPULSIVE AND CONSPICUOUS BUYING BEHAVIOR: an empirical analysis

1. Introduction

Online social networks have become significant channels of communication and self-expression, where users post photos, videos, and texts, given the ease that today's easily accessible smartphones provide for sharing. This availability of camera-equipped mobile devices allows users to record unique and meaningful moments for immediate posting on their social profiles on online networks (Fox & Rooney, 2015; Scott et al., 2018; Weiser, 2015).

Accordingly, social networks have become an environment for interaction and self-promotion, through photo sharing (Jin & Muqaddam, 2018), videos, and texts, among other elements produced by the users themselves. In this context, there is Instagram, created in 2010 by engineers Kevin Systrom and Mike Krieger (Weidlich, 2014), characterized as a social network for sharing photos and videos (Sheldon & Bryant, 2016), gaining great notoriety and adherence, mainly due to the possibility of manipulation that users can do in their photos, through filters to expose their best features (Hendrickse et al., 2017).

Several studies have emphasized the influence of social networks on self-promotion (Li et al., 2021; Sheldon & Bryant, 2016), impulse purchases (Djafarova & Bowes, 2021), social comparison (Meier & Schäfer, 2018; Tiggemann et al., 2018), on the relationship between narcissism and self-promotion (Moon et al., 2016) and, more broadly, the use of social media in impulsive and conspicuous consumption (Aragoncillo & Orus, 2018; Burnasheva & Gu, 2020; Taylor & Strutton, 2016).

However, there is a gap in the literature on investigations that relate in an integrated way the use of Instagram with narcissism, the desire for self-promotion, and its possible influences on impulse and conspicuous consumption, both in Brazil and worldwide.

Given this context, and based on the existing empirical evidence on the subject (Aragoncillo & Orus, 2018; Burnasheva & Gu, 2020; Djafarova & Bowes, 2021; Meier & Schäfer, 2018; Moon et al., 2016; Sheldon & Bryant, 2016; Taylor & Strutton, 2016; Tiggemann et al., 2018), as well as the role of intermediary in the purchasing process played by Instagram (Yang et al., 2020), the present research aims to investigate the influence of the use of Instagram, by Brazilian users, in the behaviors of narcissism and desire for self-promotion and, what are their possible impacts on impulse and conspicuous consumption.

To this end, data were collected through an online survey, namely using Google forms, during the months of July and August 2020, obtaining a total of 316 valid responses. The conceptual model developed was operationalized through the use of the multivariate statistical technique of structural equation modeling with partial least squares estimation (Partial least squares structural equation modeling-PLS-SEM).

The results found in the present investigation suggest that Instagram use has direct causal influences on both conspicuous consumption behavior and impulse consumption behavior and that narcissism and the desire for self-promotion in conjunction with Instagram use play important roles in conspicuous consumption behavior.

In terms of theoretical implications, the results suggest that Instagram use, Narcissism, and Self-Promotion Desire, in line with Conspicuous Consumption Behavior, enclose within themselves a feedback relationship. The greater the use of Instagram, the greater the Narcissism, Self-Promotion Desire, and Conspicuous Consumption Behavior, which in turn will intensify the aforementioned behaviors, creating a vicious circle. From a practical standpoint, our

results suggest that Instagram can be understood both as a showcase used by its users to demonstrate the evidence of wealth, status, beauty, and power in search of recognition, and as an ideal platform for launching goods and products that appeal to a sense of exclusivity, recognition, status, and prestige.

In terms of structure, after this introduction, this research is structured in six other sections. Next, the theoretical framework is presented together with the established research hypotheses and the conceptual model developed. Subsequently, the methods employed to reach the proposed objectives are described. Subsequently, the results are presented, particularly regarding the characterization of the sample, as well as the measurement and structural evaluations of the proposed model. Finally, the discussion of the results, the conclusions, and the references used are presented.

2. Theoretical Framework and Research Hypotheses

2.1 Instagram use, narcissism, self-promotion, and consumer behavior

Instagram's main distinguishing attribute is its photo and video sharing (Dumas et al., 2017). To do this, the social network has tools that allow users to modify their photos through filters, whose purpose is to make the photo more attractive to achieve greater engagement in the post (Fardouly et al., 2018; Moore & Craciun, 2021), thus influencing people's behavior via the appearance of the photos (Couture Bue, 2020).

Instagram has become a social network of interpersonal connection in which people seek to follow the daily lives of other people, whether famous personalities, friends, or family. A high interpersonal relationship was found in its use, especially since people use Instagram for creative purposes, to show their skills to promote themselves, and look more interesting in front of other users (Sheldon & Bryant, 2016).

Given the high popularity of Instagram among young people, especially due to its photo-sharing mechanisms and filters, which make the social network more attractive, Instagram becomes a fertile ground for narcissistic individuals (Buffardi & Campbell, 2008). Accordingly, narcissistic people use social networks more because of the possibility of controlling the social network environment, which enables them to intensify their power of self-promotion (Buffardi & Campbell, 2008; Sheldon & Bryant, 2016).

Therefore, narcissistic people spend more time on social networks, prioritize appearances, and tend to alter photos more often before posting, a behavior that may be related to insecurity, that is, editing photos in excess is one of the characteristics of people considered narcissistic (Fox & Rooney, 2015; Raskin & Terry, 1988).

The need for popularity is related to narcissism, and the frequency of social media posts is one of the factors that influence narcissism (Fox & Rooney, 2015). On Instagram, people take pretty and flashy pictures to increase their popularity, and narcissistic people are more inclined to post pictures that mainly highlight their attractiveness (Kapidzic, 2013; Sheldon et al., 2017).

Hendrickse et al. (2017) highlight how easy it is for people to compare themselves with each other on social networks, leading to the growth of people's desire to be socially desirable in front of other users, which justifies the behavior of posting pictures in exotic places, performing challenging tasks and acquiring new goods (Wu & Srite, 2021).

Thus, Instagram users are more concerned about their image in front of other users (Hendrickse et al., 2017), so Instagram has a great impact on the process of social comparison and the desire for self-promotion (Ahadzadeh et al., 2017).

Sheldon et al. (2017) emphasized the influence of the use of Instagram on the desire for self-promotion, so that users seek to get a greater number of "likes" on their posts. Besides the

"likes" users strive to have a greater number of followers, since a greater number of followers means greater popularity.

Self-promotion is also related to the frequency of social network posts, whereby users post pictures of their personal life and daily life to receive positive feedback (Najmul et al., 2018). The search for positive interactions causes users to perform a kind of selection, in which they seek to display attractive facts to present themselves to convey an ideal image and receive positive interactions (Ahadzadeh et al., 2017).

Thus, we argue that:

H₁: Instagram use exerts a positive influence on both Narcissism and Self-promotion.

Social networks act as a trigger for luxury goods consumption (Thoumrungroje, 2014), and in this sense, posting purchase behavior on social networks is already understood as a form of conspicuous behavior (Burnasheva & Gu, 2020).

Social media use influences conspicuous consumption and this behavior is positively related to the desire for self-promotion (Burnasheva & Gu, 2020; Taylor & Strutton, 2016). The intensity of social media use has a positive impact on conspicuous consumption, so the well-being resulting from social media can decrease people's control over their consumption behavior, so the more an individual feels good, the more susceptible they are to do a conspicuous consumption (Thoumrungroje, 2014).

That said, when analyzing the influence of impulse buying on Instagram based on Djafarova and Bowes (2021), it is evident that the female audience identified Instagram as their most used social network, having the visual elements of the social network as the main reason for use. A finding includes that women use social networks to follow celebrities and fashion. The aforementioned authors point out that the women interviewed stated that Instagram has changed the way they shop for fashion items.

In this sense, we argue that:

H_{1.1}: Instagram use exerts a positive direct causal effect on both Impulsive and Conspicuous Buying Behavior.

Narcissistic people think they are better than other people, are individualistic, extroverted, like to show off to other people, and have a great sense of grandeur (Raskin & Novacek, 1989; Sheldon & Bryant, 2016).

Individuals with narcissistic traits seek to be the center of attention, like to occupy leadership roles to exert more power over other people, and believe they are more attractive, intelligent, and creative (Grijalva & Zhang, 2016). Carlson (2013) complements this thought by stating that narcissistic people, besides being extroverted, are nasty people who often offend others to gain attention.

Individuals with high rates of narcissism know they are narcissistic and like to boast about it, they even value their qualities as superior to those of their peers, as well as criticize and belittle other people more often, being more susceptible to offend and assault other people for free (Carlson, 2013; Grijalva & Zhang, 2016). Such individuals tend to overuse social networks to gain more visibility, using charisma to captivate other users to promote themselves (Jabeen et al., 2020).

Narcissism influences users' desire for self-promotion on social networks, as they seek to post more photos to promote themselves (Carpenter, 2012). From this perspective, Moon et al. (2016) studied the role of narcissism on self-promotion on Instagram. The study analyzed three factors to understand the effects of narcissism on self-promotion behavior on Instagram,

and the factors are (1) proportion of selfies; (2) frequency of posting selfies, and (3) frequency of profile photo updates and self-evaluation.

In this scenario, posting selfies on social media is a popular activity that exemplifies self-promotion of their image, thus making people more popular on social media (Jin & Muqaddam, 2018), reinforcing the claim that users with high levels of narcissism post selfies more frequently to promote themselves (Fox & Rooney, 2015).

Thus, we argue that:

H₂: Narcissism exerts a positive influence on Self-promotion.

2.2 Relationships between Narcissism, Self-promotion, and Consumer behaviors

Narcissism is related to impulsive consumption practices. Since narcissistic individuals are very concerned about their image, they usually consume more to be noticed by other people (Muniz & O'Guinn, 2001). Thus, narcissistic people are more likely to make impulse purchases, impulsiveness being one of the characteristics of narcissism (Cai et al., 2015). Narcissism is also linked to marketing, which, by establishing consumers as the center of attention, enhances the development of their feeling of grandeur in them (Lambert et al., 2014).

Pilch and Górnik-Durose (2017) when investigating the relationship of narcissism with materialism, found evidence pointing to the fact that grandiose and vulnerable narcissism is associated with materialism and an inclination for conspicuous consumption. In this same vein, the increase in luxury consumption is related to narcissistic consumers, who aim for self-promotion through the consumption of such luxury items (Kang & Park, 2016).

In addition, narcissism influences self-promotion behavior on Instagram, especially among narcissistic users. Such users post photos more frequently for self-promotion in front of non-narcissistic people (Moon et al., 2016).

In this way, we argue that:

H₃: Narcissism exerts a positive influence on both Impulsive and Conspicuous Buying Behavior;

H_{3.1}: Narcissism positively mediates the relationships between Instagram use, Impulsive and Conspicuous Buying Behavior.

Conspicuous consumption can be understood as the acquisition and display of an item to show off wealth (Zheng et al., 2018). More specifically, it can be characterized as an exaggerated expenditure on goods and services whose purpose is the display of a certain social status and socioeconomic power (Veblen, 1899), which, in turn, have the potential to directly influence consumption (Ramakrishnan et al., 2020).

From this perspective, conspicuous consumption is related to public visibility. In other words, consumption tends to increase when other people are watching (Clingsmith & Sheremeta, 2018). For people who have conspicuous consumption behavior, satisfaction is not aroused by acquiring or using a certain product, but rather from the reaction that other people will have to such an act (Barauskaite et al., 2018).

Accordingly, self-promotion is an important motivation for the consumption of goods and services that can bring prestige or maintain one's social status, this being one of the characteristics of conspicuous consumption (Taylor & Strutton, 2016). Previous research has not been sufficient to link impulse buying with the desire for self-promotion. However, there is an indirect relationship between impulse buying, social comparison, and social media use (Lim & Yang, 2019), in which social network users engage in impulse purchases for self-promotion (Taylor & Strutton, 2016).

Therefore, we argue that:

H₄: Self-promotion exerts a positive influence on both Impulsive and Conspicuous Buying Behavior;

H_{4.1}: Self-promotion positively mediates the relationships between Instagram use, Impulsive and Conspicuous Buying Behavior.

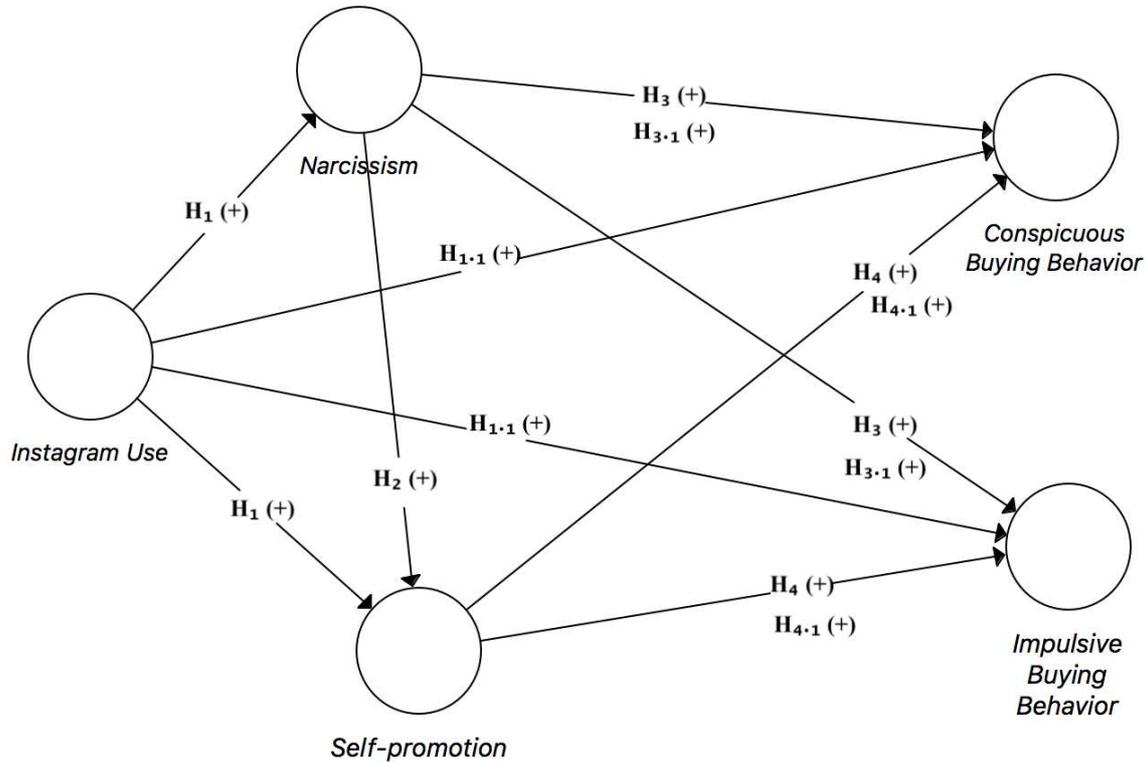


Figure 1 presents the conceptual model developed, as well as the research hypotheses established.

In general, the model developed is characterized as a reflexive model (Chin, 1998; Edwards & Bagozzi, 2000; Henseler et al., 2009) based on other empirical research (Aragoncillo & Orus, 2018; Burnasheva & Gu, 2020; Taylor & Strutton, 2016), that partially relate the use of social networks with narcissism, the desire for self-promotion and behaviors of conspicuous and impulsive consumption. Due to this, the model presented in the current research differs from other models for having an integrative approach, relating at the same time all the aforementioned variables from the use of Instagram.

3.Method

3.1 Data Collection

Data were collected through the application of an online survey, using the Google Forms platform, during the period from July 15 to August 15, 2020. The data collection instrument was composed of two parts. The first part referred to the measurement scales of the constructs

presented in this research. The second part was the questionnaire for collecting socioeconomic data from the respondents.

If the respondent was not over the age of eighteen and an Instagram user, they would be redirected to the end of the questionnaire. Only one response per internet protocol (IP) was allowed, to avoid multiple responses from the same respondent. Before applying the questionnaire to the general public, a pre-test was conducted with 15 respondents to identify possible poorly worded questions before applying it to the general public. No questions were excluded.

As for the sample, the questionnaire was answered by 316 Brazilian users of Instagram, older than 18 years of age. The main target of the study was people from 18 to 54 years old composing 85.6% of users of the social network in Brazil (Statista, 2022). In addition, the sample is characterized as non-probabilistic by accessibility, since the answers were obtained according to the availability of the respondents (Saunders et al., 2007).

3.2 Measures and Statistical Techniques

The scale used to measure Instagram usage was adapted from Krasnova et al. (2013), composed of 7 items ($\alpha=0.808$); the scale for measuring narcissism was adapted from Ames et al. (2006), composed of 5 items ($\alpha=0.728$); while the scale for measuring the desire for self-promotion was adapted from Bolino and Turnley (1999), composed of 5 items ($\alpha=0.861$).

For the measurement of conspicuous consumption, the scale used was adapted from Eastman et al. (1999), composed of 5 items ($\alpha=0.772$), while the scale for measuring impulsive consumption was adapted from Kacen and Lee (2002) and Rook and Fisher (1995), consisting of 9 items ($\alpha=0.838$). All constructs presented adequate internal consistency since the Cronbach's Alpha values found are above 0.7 (Maroco & Garcia-Marques, 2006).

Instagram usage was measured using a modified 8-point Likert scale (1 = "Never" to 8 = "Several times a day"). Respondents were asked about how often they engaged in passive activities, for example following friends' conversations, and active activities such as: posting status updates and giving compliments on friends' pages. The scales were summed to create a single numerical activity index for the model.

For the narcissism scale, five items from the Narcissistic Personality Index were used (Raskin & Terry, 1988). This measure of narcissism captures data using a modified 5-point Likert scale (1 = "Strongly Disagree" to 5 = "Strongly Agree").

The desire for self-promotion was measured by a 6-point Likert scale, following other research (Bolino & Turnley, 1999; Taylor & Strutton, 2016), while conspicuous consumption was measured using a 5-point Likert scale (1 = "Strongly Disagree" to 5 = "Strongly Agree").

Finally, the measurement of impulsive consumption was done using a 7-point Likert scale (1 = Not at all likely to 7 = Very likely).

For the analysis and validation of the model developed, we chose to use the statistical technique of structural equation modeling with partial least squares estimation (Partial least squares structural equation modeling-PLS-SEM), as it is a suitable technique for exploratory investigations (Hair et al., 2012, 2016, 2019). Additionally, the software used to apply PLS-SEM was SmartPLS, version 3.3.2.

4. Results

4.1 Sample characterization

Regarding the frequency of Instagram use, 38% of respondents reported spending up to two hours per day using the social network, while 37.7% spend an average of two to four hours per day. 15.8% of the respondents revealed that they spend an average of four to six hours a

day using Instagram, while 8.5% of the respondents claimed to spend an average of more than six hours a day browsing the said social network.

Regarding the gender of the respondents, the sample consists of 65.8% female individuals, 33.8% male individuals, and 0.4% transgender individuals; of which 50.6% are aged between 18 and 24 years; 32% are aged between 25 and 34 years; 13.7% are aged between 35 and 44 years; 3.1% are aged between 45 and 54 years; while only 0.6% of the users are older than 55 years. Of the total sample, 82.6% of respondents are between 18 and 34 years old, as expected, since young adults are usually predominant on social networks (Pittman & Reich, 2016).

As for the educational level of the respondents, 41.4% have incomplete higher education; 25.6% reported having some post-graduate education; 15.8% reported having completed higher education; while 14.6% reported having completed high school. Of the remaining 2.6% of the sample, 1.3% reported not having completed high school; while the remaining 1.3% of the respondents have completed elementary school.

Concerning income, 47.1% of the respondents reported earning up to R\$1,100.00; while 24% reported earning from R\$1,101.00 to R\$2,200.00. In addition, 6% of the respondents said they earned between R\$2,201.00 and R\$3,300.00; 4.2% reported earning between R\$3,301.00 and R\$4,100.00; 4.8% reported receiving between R\$4,401.00 and R\$5,500.00, and finally, 13.8% reported earning more than R\$5,501.00.

4.2 Measurement Model Evaluation

Table 1 presents the summary of the evaluation of the measurement model. The model was estimated with all items originally constituting the constructs, as mentioned previously in section 3.2. However, the constructs of Instagram Use, Narcissism, and Impulsive Consumption, obtained Average Variance Extracted (AVE) values below 0.5, so we proceeded to eliminate the lowest factor loadings present in these constructs for model adjustment purposes. Table 1 shows the final result of the adjusted model.

Although some constructs of the final adjusted model have items with factor loadings below the recommended one, that is, above 0.708 (Hair et al., 2019), we chose to keep the items since their removal had a negative influence on both Cronbach's Alpha and Average Variance Extracted (AVE). Another reason for keeping the items with factor loadings lower than recommended, in this case, all above 0.6, lies in the fact that for exploratory studies, factor loadings with values of 0.4 or above are considered satisfactory (Hulland, 1999).

Table 1: Summary of the Measurement Model Evaluation

Standard Factorial Loadings	Instagram use	Narcissism	Self-promotion	Conspicuous Buying Behavior	Impulsive Buying Behavior
IU-01- How often do you comment on your friends' pages?	0,743				
IU-02- How often do you check your friends' updates?	0,668				
IU-03- How often do you post updates?	0,745				

IU-04- How often do you look at your friends' conversations?	0,722				
IU-06- How often do you send directs to your friends?	0,671				
NC01- I am an extraordinary person.		0,807			
NC02- I think I am a special person.		0,765			
NC03- I am more capable than others.		0,632			
NC05- I know I am good because people keep telling me so.		0,625			
SP01- I want people to know about my achievements.			0,869		
SP02- I want to show my achievements.			0,874		
SP03- I want to show my talents to people.			0,869		
SP04- I want to take credit for positive things that I did not accomplish on my own.			0,737		
SP05- I want to make the things in my life seem better than they really are.			0,657		
CB01- On Instagram, I show the things I buy if they are expensive.				0,733	
CB02- I tend to highlight my stuff on Instagram if it has a chic appeal.				0,776	
CB03- My Instagram page includes prestigious products and brands.				0,690	
CB04- When I buy things, I like to show them off on Instagram.				0,715	
CB05- I like brands on Instagram because they have status.				0,698	
IB01- I usually buy things spontaneously.					0,711
IB02- "Just do it" describes the way I buy things.					0,800
IB03- I often buy things without thinking.					0,878
IB04- "I see it, I buy it" describes my buying behavior.					0,882
IB05- "Buy now, think later" describes my buying behavior.					0,847
IB06- Sometimes I feel like buying things in the heat of the moment.					0,747
IB07- I buy things according to how I feel at the moment.					0,744
IB09- Sometimes I am a little reckless with what I buy.					0,700

Average Variance Extracted (AVE)	0,505	0,507	0,650	0,523	0,627
Cronbach's Alpha	0,759	0,667	0,861	0,772	0,915
Composite Reliability	0,836	0,802	0,902	0,846	0,930
Discriminant validity	Instagram use	Narcissism	Self-promotion	Conspicuous Buying Behavior	Impulsive Buying Behavior
Instagram use	0,711				
Narcissism	0,188	0,712			
Self-promotion	0,325	0,239	0,806		
Conspicuous Buying Behavior	0,353	0,181	0,479	0,723	
Impulsive Buying Behavior	0,244	0,069	0,196	0,316	0,792

Note: On the main diagonal are reported the Average Variance Extracted (AVE) and, off the diagonal, are presented the values of squared correlations between the model's constructs.

Concerning the Average Variance Extracted (AVE), table 1 allows us to conclude that the structural model developed presents a satisfactory result, in terms of convergent validity, with Fornell and Larcker criteria being followed (Hair et al., 2016; Henseler et al., 2009; Wong, 2013), since the values obtained for the AVE are greater than 0.5 in all constructs.

In terms of the reliability of the answers obtained, the values of Cronbach's Alpha and Composite Reliability, presented in table 1, allow us to conclude that all reflective latent variables have satisfactory internal consistency, considering that both one measure and the other have values above 0.6, as recommended for exploratory studies (Bagozzi & Yi, 1988; Wong, 2013).

Regarding discriminant validity, the AVE of each latent variable is greater than the square of the correlations of all the other latent variables, so it can be concluded, according to the Fornell-Larcker criteria (Bido & Da Silva, 2019; Henseler et al., 2009), that the model has satisfactory discriminant validity.

Since the results of the measurement model evaluation were satisfactory, we proceeded to the structural model evaluation.

4.3 Structural Model Evaluation

The evaluation of the structural model was performed through the criteria of Pearson's Coefficient of Determination (R^2), the significance of the established relationships, the Predictive Validity (Q^2), and the Effect Size (f^2), as suggested by the literature (Hair et al., 2012, 2016, 2019; Henseler et al., 2009; Wong, 2013).

Figure 2 presents the final result of the structural model. In this perspective, it is possible to state that only 3.5% of the variance of the Narcissism construct is explained by the model ($R^2=0.035$), mainly, by the exogenous construct of Instagram Use; while another 13.8% of the variance of the self-promotion construct can be explained by the model ($R^2=0.138$), namely, by the constructs of Instagram Use and Narcissism.

In this same sense, only 7.4% of the variance of the endogenous construct of Impulse Consumption Behavior is explained by the structural model ($R^2=0.074$). These results indicate that the mentioned constructs are weakly explained by the model, according to the parameters of the determination coefficient, whose values of 0.67, 0.33, and 0.19, indicate strong, moderate, and weak explanatory power, respectively (Chin & Newsted, 1999).

On the other hand, the model developed can explain 27.4% of the variance of the endogenous construct Conspicuous Consumption Behavior, which can be considered an explanatory power situated in the range between weak and moderate, according to the parameters of the coefficient of determination (Chin & Newsted, 1999).

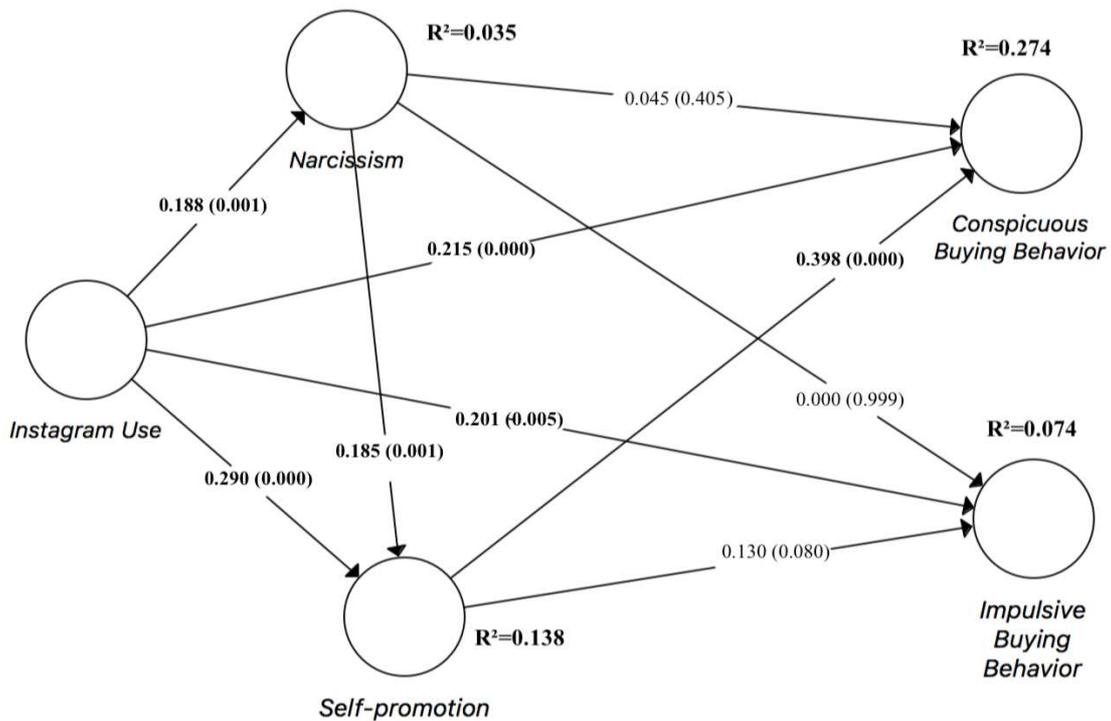


Figure 2: Result of the Proposed Structural Model.

Regarding the significance of the established relationships, from figure 2 it is possible to state that Instagram Usage has a direct positive influence on both Self-promotions ($\beta=0.290$; $p<0.01$) and Narcissism ($\beta=0.188$, $p<0.01$); that Narcissism has a direct positive influence on Self-Promotion ($\beta=0.185$, $p<0.01$) and that Self-Promotion has a direct positive influence on Conspicuous Consumption Behavior ($\beta=0.398$, $p<0.01$), this being the strongest direct relationship.

Adding to this, it is also found that Instagram Usage has a direct positive causal effect - controlled by Narcissism and Self-Promotion - on both Conspicuous Consumption Behavior ($\beta=0.215$; $p<0.01$) and Impulse Consumption Behavior ($\beta=0.201$; $p<0.01$).

However, since we intend to analyze some indirect relations not directly presented in figure 2, we proceeded to produce table 2 to verify the direct, indirect, and total relations, to extract complementary information to subsidize the decisions about the established research hypotheses.

Table 2: Summary of the Effects.

Effects		Coefficients	Standard Deviation	t-value	p-value
<i>Instagram Use x Conspicuous Buying Behavior</i>					
Direct	Instagram Use→ Conspicuous Buying Behavior	0.215	0.055	3.898	0.000
Indirect	Instagram Use→ Narcissism→Conspicuous Buying Behavior	0.008	0.011	0.740	0.459
Indirect	Instagram Use→ Self-Promotion→Conspicuous Buying Behavior	0.115	0.025	4.584	0.000
Indirect	Instagram Use→ Narcissism→Self-Promotion→ Conspicuous Buying Behavior	0.014	0.006	2.272	0.024
Total	Instagram Use→ Conspicuous Buying Behavior	0.353	0.051	6.956	0.000
<i>Instagram Use x Impulsive Buying Behavior</i>					
Direct	Instagram Use→ Impulsive Buying Behavior	0.201	0.075	2.693	0.007
Indirect	Instagram Use→ Narcissism→Impulsive Buying Behavior	0.000	0.013	0.002	0.999
Indirect	Instagram Use→ Self-Promotion→Impulsive Buying Behavior	0.038	0.024	1.546	0.123
Indirect	Instagram Use→ Narcissism→Self-Promotion→ Impulsive Buying Behavior	0.005	0.003	1.300	0.194
Total	Instagram Use→ Impulsive Buying Behavior	0.244	0.065	3.766	0.000
<i>Instagram Use x Self-Promotion</i>					
Direct	Instagram Use→ Self-Promotion	0.290	0.052	5.596	0.000
Indirect	Instagram Use→ Narcissism→Self-Promotion	0.035	0.014	2.404	0.016
Total	Instagram Use→ Self-Promotion	0.325	0.051	6.294	0.0000
<i>Narcissism x Conspicuous Buying Behavior</i>					
Direct	Narcissism→ Conspicuous Buying Behavior	0.045	0.054	0.832	0.405
Indirect	Narcissism→Self-promotion → Conspicuous Buying Behavior	0.074	0.022	3.288	0.001
Total	Narcissism→ Conspicuous Buying Behavior	0.119	0.057	2.090	0.037
<i>Narcissism x Impulsive Buying Behavior</i>					
Direct	Narcissism→ Impulsive Buying Behavior	0.0001	0.065	0.001	0.999

Indirect	Narcissism→Self-promotion → Impulsive Buying Behavior	0.024	0.0160	1.503	0.133
Total	Narcissism→ Impulsive Buying Behavior	0.0241	0.0622	0.388	0.698

According to the detailed analysis of Table 2, it is possible to infer that considering the direct and indirect effects, embodied in the total effects, Instagram Usage has even greater positive effects on Conspicuous Consumption Behaviors ($\beta=0.353$; $p<0.01$), Impulse Consumption Behaviors ($\beta=0.244$; $p<0.01$) and Self-Promotion ($\beta=0.325$; $p<0.01$).

Adding to this, in terms of total effects, it is possible to state that Narcissism has a positive influence on Conspicuous Consumption Behavior ($\beta=0.119$; $p<0.05$), a relationship that does not hold when considering only the direct relationship between the constructs, as presented in figure 2.

In terms of indirect relationships, Table 2 allows for the conclusion that Self-Promotion has a positive mediating influence on the relationship between Instagram Usage and Conspicuous Consumption Behavior ($\beta=0.115$; $p<0.01$); and that Self-Promotion in conjunction with Narcissism, also has a positive mediating influence on the relationship between Instagram Usage and Conspicuous Consumption Behavior ($\beta=0.014$; $p<0.05$).

Other interesting findings extracted from Table 2, particularly in terms of indirect relationships, concern the positive mediating influence of Narcissism on the relationship between Instagram Use and Self-Promotion ($\beta=0.035$; $p<0.05$) and the positive mediating influence of Self-Promotion on the relationship between Narcissism and Conspicuous Consumption Behavior ($\beta=0.074$; $p<0.01$).

As mentioned earlier, Predictive Validity (Q^2) and Effect Size (f^2) were calculated to complete the structural model analysis. These measures are important because they demonstrate the accuracy of the adjusted model and the usefulness of each construct developed (Hair et al., 2019; Henseler et al., 2009; Wong, 2013). Table 3 presents the results of Predictive Validity and Effect Size.

Table 3: Summary of the results of the Predictive Validity and Effect Size

Relationships between the constructs	Predictive Validity (Q^2)	Effect Size (f^2)
Narcissism→ Self-promotion	0.02	0.037
Narcissism →Conspicuous Buying Behavior	-0.001	0.001
Narcissism →Impulsive Buying Behavior	-0.001	-0.002
Self-promotion →Conspicuous Buying Behavior	0.08	0.176
Self-promotion →Impulsive Buying Behavior	0.01	0.012

Considering that $Q^2 > 0$ indicates predictive relevance, values of 0.02, 0.15, and 0.35 indicate weak, moderate, and strong effects, respectively, for both Predictive Validity and Effect Size (Hair et al., 2013; Henseler et al., 2009), Table 3 allows us to conclude that:

(a) From the exogenous construct of Narcissism to the endogenous construct of Self-Promotion, there is both Predictive Validity and Effect Size, although the effects are weak; (b) From the exogenous construct of Narcissism to the endogenous construct of Impulse Consumption, there is neither Predictive Validity nor Effect Size, since the values of the measures are less than zero; (c) From the exogenous construct of Narcissism to the endogenous construct of Conspicuous Consumption, there is no Predictive Validity, but there is the utility of the construct (Effect Size), although the effect is small; (d) From the exogenous construct of Self-Promotion to the endogenous constructs of Conspicuous and Impulse Consumption, there is both Predictive Validity and utility of the construct.

Regarding the Impulse Consumption Behavior construct the effects of the two measures are small, while for the Conspicuous Consumption Behavior construct, the effects are weak for Predictive Validity and moderate for Effect Size.

Since both the measurement and structural models have been properly validated and analyzed, Table 4 presents the summary of the developed research hypotheses.

Table 4: Summary of the results of the research hypotheses.

Hypotheses	Relationship	Expected Signal	Results
H_1	Instagram Use → Narcissism and Self-promotion	+	Supported
$H_{1,1}$	Instagram Use → Impulsive and Conspicuous Buying Behavior	+	Supported
H_2	Narcissism → Self-promotion	+	Supported
H_3	Narcissism → Impulsive and Conspicuous Buying Behavior	+	Partially Supported
$H_{3,1}$	Instagram Use → Narcissism → Impulsive and Conspicuous Buying Behavior	+	Rejected
H_4	Self-promotion → Impulsive and Conspicuous Buying Behavior	+	Partially Supported
$H_{4,1}$	Instagram Use → Self-promotion → Impulsive and Conspicuous Buying Behavior	+	Partially Supported

5. Discussion

5.1 Theoretical Implications

The empirical results of the present research suggest that Instagram use has direct positive influences on both Narcissism and Self-Promotion. Furthermore, Narcissism acts as a positive mediator in the relationship between Instagram use and Self-Promotion.

These results follow the postulates of the available literature on the subject (Ahadzadeh et al., 2017; Buffardi & Campbell, 2008; Fox & Rooney, 2015; Kapidzic, 2013; Najmul et al., 2018; Sheldon et al., 2017; Sheldon & Bryant, 2016), which points out that social networks, with special emphasis on Instagram, potentiate the behaviors of Narcissism and the Desire for Self-Promotion.

More specifically, the functional characteristics of Instagram, both in terms of features - such as ease of use for manipulation of photos and videos through filters and subsequent sharing - and *modus operandi*, centered on the "I" and how control is given to it for the development of an image that is socially acceptable and relevant to other users, make its users have a greater predisposition to Narcissism and Self-Promotion behaviors in that social network.

If on the one hand, the use of Instagram has direct positive influences on both Narcissism and the Desire for Self-Promotion, it can be said that the opposite is also true. Narcissistic people spend more time on social networks, staying connected longer, prioritizing appearances, and altering photos more often before posting (Fox & Rooney, 2015). In addition, Self-promotion is also related to the frequency of posting on social networks, whereby users post pictures of their personal life and daily life to receive positive feedback (Najmul et al., 2018).

Thus, we argue that, in theoretical terms, there is a feedback relationship between the use of Instagram, Narcissism, and Desire for Self-Promotion. The more someone uses Instagram, the more predisposed they will be to Narcissism and Self-Promotion Desire, which will consequently lead to intensified use of the social network.

Another empirical evidence found, refers to the direct causal positive influence - controlled by Narcissism and the Desire for Self-Promotion - of Instagram use on Conspicuous and Impulse Consumption behaviors, confirming and extending the available literature (Burnasheva & Gu, 2020; Djafarova & Bowes, 2021; Taylor & Strutton, 2016; Thourunroje, 2014).

We argue that such effects are not necessarily related to some intrinsic functionality feature of the social network analyzed, although we recognize that its visual elements may influence impulse buying behavior, as pointed out by Djafarova and Bowes (2021).

We postulate that such influences can be understood as a characteristic, strategy, or spectrum that defines or underlies part of the feedback relationship between Instagram use, Narcissism, and the Desire for Self-Promotion.

In other words, since this social network is based on the "I" as the center of attention, the act of posting a certain purchase is already characterized as a form of conspicuous behavior (Burnasheva & Gu, 2020) for Self-Promotion (Burnasheva & Gu, 2020; Taylor & Strutton, 2016), and those narcissistic individuals tend to consume more to be noticed by other people (Muniz & O'Guinn, 2001). The empirical evidence found may be related to the users' effort to develop - consciously or unconsciously - a *persona* to demonstrate social status and socio-economic power (Veblen, 1899; Zheng et al., 2018).

That *persona*, by distinguishing itself from others, will receive more attention and prestige, which will reinforce self-promotion and narcissism, which in turn will lead to a sense of well-being that will reduce control over consumption behavior (Thourunroje, 2014), potentiating conspicuous and impulse consumption.

However, this effect materializes more strongly in conspicuous consumption behavior, since there were no direct or indirect effects of Narcissism and Self-Promotion on impulse buying behavior, and only 7.4% of the variation in this construct is explained by the model.

Within this perspective, the empirical evidence found suggests that: (a) Narcissism has positive influences on both Self-Promotion and Conspicuous Consumption Behavior, (b) that Self-Promotion has a positive mediating influence on the relationship between Narcissism and

Conspicuous Consumption Behavior; while at the same time agreeing with other research (Carpenter, 2012; Fox & Rooney, 2015; Jabeen et al., 2020; Jin & Muqaddam, 2018; Moon et al., 2016; Pilch & Górnik-Durose, 2017), which hence corroborates our previous argument.

The existing relationships between Narcissism, Self-Promotion, and Conspicuous Consumption Behavior, are in line with the evidence, found pointing to the direct influence of Self-Promotion on conspicuous consumption behavior, confirming the literature (Ramakrishnan et al., 2020; Taylor & Strutton, 2016). Furthermore, the positive mediating role of Self-Promotion, alone or in conjunction with Narcissism, in the relationship between Instagram Usage and Conspicuous Consumption Behavior, constitutes the foundation that supports the need for the development of the aforementioned *personas*.

The more narcissistic a user is, the greater their need for self-promotion, which invariably makes them consume conspicuously to obtain greater public visibility and satisfaction from the reaction of others (Barauskaite et al., 2018).

In turn, this will lead to more consumption, since consumption tends to increase when other people are watching (Clingsmith & Sheremeta, 2018), especially if it involves the consumption of goods and services perceived as exclusive and of value that attest to how special the personas involved in the act of consumption are and deserve recognition by their followers.

5.2 Practical Implications

In practical terms, the results found in the aforementioned research can be understood in two ways. From the point of view of its users, the use of Instagram, as well as its influences on narcissism, self-promotion, and conspicuous consumption behaviors and impulse, seem to stimulate and reinforce the ever-pressing desire for recognition and appreciation by other people.

Thus, when we consider the centrality of the "I" present in the use of Instagram and its consequent appeal to our Ego, which tends to personalize everything to make us feel special, unique, and worthy of all attention, Instagram transfigures into a kind of showcase for both consumption and the demonstration of wealth, of beauty, status and power so that its users can finally achieve and preserve the esteem of others because just having wealth and power are not enough, it is necessary to show them clearly, since only evidence can bring esteem (Veblen, 1899).

The stage is set. To satisfy those needs and desires not met by everyday life, Instagram is a good platform to fill somewhat empty lives and for people seeking recognition often not obtained at work or home.

On the other hand, from a business point of view, Instagram seems to be an ideal place to run marketing campaigns, especially concerning communication strategy.

Assuming the empirical evidence that the use of Instagram has direct causal influences on both Conspicuous Consumption Behavior and Impulse Consumption Behavior, the launches of new goods and services on the said social network that appeals to and reinforces the sense of exclusivity, prestige, and status, whether by luxury brands or not, have a greater chance of success since its users perceive Instagram as a platform to enhance their desire for recognition and approval in front of their followers.

6. Conclusion, Limitations, and Future Research

The present investigation aimed to analyze the roles of Instagram use, narcissism, and desire for self-promotion in conspicuous and impulse consumption behaviors.

The empirical evidence found points to the fact that the use of Instagram has direct causal influences on both conspicuous consumption behavior and impulse consumption behavior. However, when checking the effect of narcissism and the desire for self-promotion in conjunction with the use of Instagram, the results found indicated that these constructs have influences only on conspicuous consumption behavior.

Given the results found, regarding the existing relationship between Instagram use, Narcissism, Desire for Self-Promotion, and Conspicuous Consumption Behavior, we argue that Instagram can be characterized as a kind of showcase for the presentation of evidence of wealth, beauty, status, and power so that its users can satisfy their needs of obtaining esteem and approval from their followers.

More specifically, the ease of manipulation of photos and videos, as well as the centrality of the "I" and the appeal to the Ego, allow the social network analyzed to become the ideal place for the search for recognition often not found in other spheres of life, such as work or private life, especially through ostentatious consumption.

If on the one hand Instagram can be seen as a determinant for the act of buying what one does not need, to show to those who do not care - is it possible that a user knows all their thousands of followers and assigns value to all equally? On the other hand, it can be seen as an important platform for launching goods and services that appeal to its users' sense of exclusivity, prestige, and status.

Regarding its limitations, the present research was conducted in a specific context, the Brazilian one, so the conclusions should be interpreted with caution in terms of transferability to other contexts. Another important limitation lies in the sample size, which, despite being statistically significant, does not adequately represent Brazilian users as a whole, so the results should be interpreted more as an indication of the occurrence of the phenomena found, requiring further research.

Since we made evident the influence of Instagram use on Conspicuous and Impulse Consumption Behaviors, with Narcissism and the Desire for Self-Promotion having a relevant role in Conspicuous Consumption Behavior, we suggest as future research the investigation of the following questions: Does conspicuous consumption performed through Instagram lead to satisfaction? What are the practical and psychological impacts of not recognizing the Conspicuous Consumption Behavior shared on Instagram? What specific features of this social network influence Narcissism, Desire for Self-Promotion, and Consumption Behaviors?

References

- Ahadzadeh, A. S., Pahlevan Sharif, S., & Ong, F. S. (2017). Self-schema and self-discrepancy mediate the influence of Instagram usage on body image satisfaction among youth. *Computers in Human Behavior*, 68, 8–16.
- Ames, D. R., Rose, P., & Anderson, C. P. (2006). The NPI-16 as a short measure of narcissism. *Journal of Research in Personality*, 40(4), 440–450.
- Aragoncillo, L., & Orus, C. (2018). Impulse buying behaviour: an online-offline comparative and the impact of social media. *Spanish Journal of Marketing - ESIC*, 39, 88.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94.

- Barauskaite, D., Gineikiene, J., Fennis, B. M., Auruskeviciene, V., Yamaguchi, M., & Kondo, N. (2018). Eating healthy to impress: How conspicuous consumption, perceived self-control motivation, and descriptive normative influence determine functional food choices. *Appetite, 131*, 59–67.
- Bido, D. de S., & Da Silva, D. (2019). SmartPLS 3: especificação, estimação, avaliação e relato. *Administração Ensino E Pesquisa, 20*(2), 1–31.
- Bolino, M. C., & Turnley, W. H. (1999). Measuring Impression Management in Organizations: A Scale Development Based on the Jones and Pittman Taxonomy. *Organizational Research Methods, 2*(2), 187–206.
- Buffardi, L. E., & Campbell, W. K. (2008). Narcissism and social networking Web sites. *Personality & Social Psychology Bulletin, 34*(10), 1303–1314.
- Burnasheva, R., & Gu, S. Y. (2020). The influence of social media usage, self-image congruity, and self-esteem on conspicuous online consumption among millennials. *Asia Pacific Journal of Marketing and Logistics, 33*(5), 1255–1269.
- Cai, H., Shi, Y., Fang, X., & Luo, Y. L. L. (2015). Narcissism predicts impulsive buying: phenotypic and genetic evidence. *Frontiers in Psychology, 6*, 881.
- Carlson, E. N. (2013). Honestly Arrogant or Simply Misunderstood? Narcissists' Awareness of their Narcissism. *Self and Identity: The Journal of the International Society for Self and Identity, 12*(3), 259–277.
- Carpenter, C. J. (2012). Narcissism on Facebook: Self-promotional and anti-social behavior. *Personality and Individual Differences, 52*(4), 482–486.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (Vol. 295, pp. 295–336). London: Lawrence Erlbaum Associates.
- Chin, W. W., & Newsted, P. R. (1999). Structural equation modeling analysis with small samples using partial least squares. In R. H. Hoyle (Ed.), *Statistical strategies for small sample research* (pp. 307–341). Thousand Oaks, CA: Sage.
- Clingingsmith, D., & Sheremeta, R. M. (2018). Status and the demand for visible goods: experimental evidence on conspicuous consumption. *Experimental Economics, 21*(4), 877–904.
- Couture Bue, A. C. (2020). The looking glass selfie: Instagram use frequency predicts visual attention to high-anxiety body regions in young women. *Computers in Human Behavior, 108*, 106329.

- Djafarova, E., & Bowes, T. (2021). "Instagram made Me buy it": Generation Z impulse purchases in fashion industry. *Journal of Retailing and Consumer Services*, *59*, 102345.
- Dumas, T. M., Maxwell-Smith, M., Davis, J. P., & Giulietti, P. A. (2017). Lying or longing for likes? Narcissism, peer belonging, loneliness, and normative versus deceptive like-seeking on Instagram in emerging adulthood. *Computers in Human Behavior*, *71*, 1–10.
- Eastman, J. K., Goldsmith, R. E., & Flynn, L. R. (1999). Status Consumption in Consumer Behavior: Scale Development and Validation. *Journal of Marketing Theory and Practice*, *7*(3), 41–52.
- Edwards, J. R., & Bagozzi, R. P. (2000). On the nature and direction of relationships between constructs and measures. *Psychological Methods*, *5*(2), 155–174.
- Fardouly, J., Willburger, B. K., & Vartanian, L. R. (2018). Instagram use and young women's body image concerns and self-objectification: Testing mediational pathways. *New Media & Society*, *20*(4), 1380–1395.
- Fox, J., & Rooney, M. C. (2015). The Dark Triad and trait self-objectification as predictors of men's use and self-presentation behaviors on social networking sites. *Personality and Individual Differences*, *76*, 161–165.
- Grijalva, E., & Zhang, L. (2016). Narcissism and Self-Insight: A Review and Meta-Analysis of Narcissists' Self-Enhancement Tendencies. *Personality & Social Psychology Bulletin*, *42*(1), 3–24.
- Hair, J. F., Jr, Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. SAGE Publications, Thousand Oaks.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2012). Partial Least Squares: The Better Approach to Structural Equation Modeling? *Long Range Planning*, *45*(2012), 312–319.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial Least Squares Structural Equation Modeling: Rigorous Applications, Better Results, and Higher Acceptance. *Long Range Planning*, *46*(1-2), 1–12.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2–24.
- Hendrickse, J., Arpan, L. M., Clayton, R. B., & Ridgway, J. L. (2017). Instagram and college women's body image: Investigating the roles of appearance-related comparisons and intrasexual competition. *Computers in Human Behavior*, *74*, 92–100.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In Sinkovics, R.R. and Ghauri, P.N. (Ed.), *New*

- Challenges to International Marketing* (Vol. 39, pp. 277–319). Emerald Group Publishing Limited.
- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: a review of four recent studies. *Strategic Management Journal*, 20(2), 195–204.
- Jabeen, F., Gerritsen, C., & Treur, J. (2020). Narcissism and fame: a complex network model for the adaptive interaction of digital narcissism and online popularity. *Applied Network Science*, 5(1), 1–31.
- Jin, S. V., & Muqaddam, A. (2018). “Narcissism 2.0! Would narcissists follow fellow narcissists on Instagram?” the mediating effects of narcissists personality similarity and envy, and the moderating effects of popularity. *Computers in Human Behavior*, 81, 31–41.
- Kacen, J. J., & Lee, J. A. (2002). The Influence of Culture on Consumer Impulsive Buying Behavior. *Journal of Consumer Psychology: The Official Journal of the Society for Consumer Psychology*, 12(2), 163–176.
- Kang, Y.-J., & Park, S.-Y. (2016). The perfection of the narcissistic self: A qualitative study on luxury consumption and customer equity. *Journal of Business Research*, 69(9), 3813–3819.
- Kapidzic, S. (2013). Narcissism as a predictor of motivations behind Facebook profile picture selection. *Cyberpsychology, Behavior and Social Networking*, 16(1), 14–19.
- Krasnova, H., Wenninger, H., Widjaja, T., & Buxmann, P. (2013). Envy on Facebook: a hidden threat to users’ life satisfaction? *Proceedings of the 11th International Conference on Wirtschaftsinformatik (WI2013)*, 2, 14.
- Lambert, A., Desmond, J., & O’Donohoe, S. (2014). Narcissism and the Consuming Self: An Exploration of Consumer Identity Projects and Narcissistic Tendencies. In *Consumer Culture Theory* (Vol. 16, pp. 35–57). Emerald Group Publishing Limited.
- Li, B., Scott, O. K. M., Naraine, M. L., & Ruihley, B. J. (2021). Tell me a story: Exploring elite female athletes’ self-presentation via an analysis of Instagram stories. *Journal of Interactive Advertising*, 21(2), 108–120.
- Lim, M., & Yang, Y. (2019). Upward social comparison and Facebook users’ grandiosity: Examining the effect of envy on loneliness and subjective well-being. *Online Information Review*. <https://www.emerald.com/insight/content/doi/10.1108/OIR-04-2017-0137/full/html>
- Maroco, J., & Garcia-Marques, T. (2006). Qual a fiabilidade do alfa de Cronbach? Questões antigas e soluções modernas? *Laboratório de Psicologia*, 4(1), 65–90.

- Meier, A., & Schäfer, S. (2018). The Positive Side of Social Comparison on Social Network Sites: How Envy Can Drive Inspiration on Instagram. *Cyberpsychology, Behavior and Social Networking*, *21*(7), 411–417.
- Moon, J. H., Lee, E., Lee, J.-A., Choi, T. R., & Sung, Y. (2016). The role of narcissism in self-promotion on Instagram. *Personality and Individual Differences*, *101*, 22–25.
- Moore, K., & Craciun, G. (2021). Fear of Missing Out and Personality as Predictors of Social Networking Sites Usage: The Instagram Case. *Psychological Reports*, *124*(4), 1761–1787.
- Muniz, A. M., & O’Guinn, T. C. (2001). Brand Community. *The Journal of Consumer Research*, *27*(4), 412–432.
- Najmul, I. A. K., Mäntymäki, M., & Benbasat, I. (2018). Duality of self-promotion on social networking sites. *Information Technology & People*, *32*(2), 269–296.
- Pilch, I., & Górnik-Durose, M. E. (2017). Grandiose and Vulnerable Narcissism, Materialism, Money Attitudes, and Consumption Preferences. *The Journal of Psychology*, *151*(2), 185–206.
- Pittman, M., & Reich, B. (2016). Social media and loneliness: Why an Instagram picture may be worth more than a thousand Twitter words. *Computers in Human Behavior*, *62*, 155–167.
- Ramakrishnan, A., Kalkuhl, M., Ahmad, S., & Creutzig, F. (2020). Keeping up with the Patels: Conspicuous consumption drives the adoption of cars and appliances in India. *Energy Research & Social Science*, *70*, 101742.
- Raskin, R., & Novacek, J. (1989). An MMPI description of the narcissistic personality. *Journal of Personality Assessment*, *53*(1), 66–80.
- Raskin, R., & Terry, H. (1988). A principal-components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, *54*(5), 890–902.
- Rook, D. W., & Fisher, R. J. (1995). Normative Influences on Impulsive Buying Behavior. *The Journal of Consumer Research*, *22*(3), 305–313.
- Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research Methods for Business Students: Vol. Fourth Edition*. Pearson Education.
- Scott, G. G., Boyle, E. A., Czerniawska, K., & Courtney, A. (2018). Posting photos on Facebook: The impact of Narcissism, Social Anxiety, Loneliness, and Shyness. *Personality and Individual Differences*, *133*, 67–72.

- Sheldon, P., & Bryant, K. (2016). Instagram: Motives for its use and relationship to narcissism and contextual age. *Computers in Human Behavior*, *58*, 89–97.
- Sheldon, P., Rauschnabel, P. A., Antony, M. G., & Car, S. (2017). A cross-cultural comparison of Croatian and American social network sites: Exploring cultural differences in motives for Instagram use. *Computers in Human Behavior*, *75*, 643–651.
- Statista. (2022). *Brazil: Instagram users share 2022, by age group*. Statista. <https://www.statista.com/statistics/866268/instagram-user-share-brazil-age/>
- Taylor, D. G., & Strutton, D. (2016). Does Facebook usage lead to conspicuous consumption? The role of envy, narcissism, and self-promotion. *Journal of Research in Interactive Marketing*, *10*(3), 231–248.
- Thoumrungroje, A. (2014). The Influence of Social Media Intensity and EWOM on Conspicuous Consumption. *Procedia - Social and Behavioral Sciences*, *148*, 7–15.
- Tiggemann, M., Hayden, S., Brown, Z., & Veldhuis, J. (2018). The effect of Instagram “likes” on women’s social comparison and body dissatisfaction. *Body Image*, *26*, 90–97.
- Veblen, T. (1899). *The Theory of the Leisure Class: An Economic Study of Institutions*. New York: The Macmillan Company.
- Weidlich, M. T. de M. (2014). *A informação de moda da Revista Vogue na rede social Instagram: um estudo sobre novos modelos de produção e difusão de conteúdos de moda sob o viés da convergência midiática e da cultura participativa* [Mestrado, Pontifícia Universidade Católica do Rio Grande do Sul]. <http://tede2.pucrs.br/tede2/handle/tede/4577>
- Weiser, E. B. (2015). #Me: Narcissism and its facets as predictors of selfie-posting frequency. *Personality and Individual Differences*, *86*, 477–481.
- Wong, K. K.-K. (2013). Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, *24*(1), 1–32.
- Wu, J., & Srite, M. (2021). Envy on social media: The good, the bad, and the ugly. *International Journal of Information Management*, *56*, 102255.
- Yang, K., Kim, H. M., & Tanoff, L. (2020). Signaling trust: Cues from Instagram posts. *Electronic Commerce Research and Applications*, *43*, 100998.
- Zheng, X., Baskin, E., & Peng, S. (2018). Feeling inferior, showing off: The effect of nonmaterial social comparisons on conspicuous consumption. *Journal of Business Research*, *90*, 196–205.