

Understanding the Impact of Social Comparison on Instagram Users' Self-esteem and Purchasing Behavior

Dragoş Bănică

Supervisor: Dr. Leila Mohammadi

Course: 2022/23

Research projects of the Department of Communication postgraduate programmes

Department of Communication

Universitat Pompeu Fabra

Abstract

As fewer studies have focused on the impact on users' well-being as a result of social comparison and its potential associations with users' purchasing behavior, the current thesis addresses Instagram users' perception towards the phenomenon of social comparison with influencers and celebrities, its effects on well-being, and the correlations between respondents' self-esteem levels when making a buying decision, purchasing behavior, and demographics. To achieve the objectives, quantitative data were collected through an online survey. Part of the data was later statistically analyzed using R Studio to seek possible correlations. No association relations were found between Instagram users' self-esteem level, their purchasing behavior and their demographic particularities. Although, the descriptive analysis revealed that Instagram could trigger, through social comparison, negative feelings in its users, and they are aware of this, but consider that social comparison negatively affects others' general well-being more than their own.

Keywords: Social comparison, Influencers, Celebrities, Social media, Instagram, Self-esteem, Well-being, Purchasing behavior

Table of Contents

INTRODUCTION	3
1. A BRIEF OVERVIEW OF SOCIAL COMPARISON WITH INFLUENCERS AND CELEBRITIES	6
2. THE EFFECTS OF SOCIAL COMPARISON ON SELF-ESTEEM & PURCHASING BEHAVIOR	7
2.1. Influencers/Celebrities' Characteristics & Purchasing Behavior	7
2.2. What about Brand Characteristics?	9
2.3. Social Comparison – a catalyst for the effects of social media influencers on consumers' Self-esteem & Purchasing Behavior	10
3. METHODOLOGY AND DATA ANALYSIS	11
3.1. Study methodology	11
3.2. Data Analysis – Descriptive Analysis	12
3.3. Data Analysis – Statistical Analysis	19
CONCLUSIONS AND LIMITATIONS OF THE STUDY	22
REFERENCES	25
APPENDIX	27

UNDERSTANDING THE IMPACT OF SOCIAL COMPARISON ON INSTAGRAM USERS' SELF-ESTEEM AND PURCHASING BEHAVIOR

INTRODUCTION

There are multiple studies that show that influencers and celebrities have an impact on social media users' purchasing behavior (Al Kurdi et al., 2023; Saputra et al., 2023; Ata et al., 2022; Chan, 2022; Jin & Ryu, 2020; Lin et al., 2021; Mookda et al., 2020; Patmawati & Miswanto, 2022; Tahirah et al., 2020; Yeik et al., 2022; Youssef & Lebdaoui, 2020). However, while the impact on purchasing behavior has been extensively explored, fewer studies have focused on the impact on users' levels of self-esteem and well-being as a result of social comparison and on how these factors may be related to users' purchasing behavior (Mundel et al., 2023; Tran et al., 2022). Given the limited research in this area, the current study aims to bridge a gap by specifically examining Instagram users' perception regarding the phenomenon of social comparison with influencers and celebrities, and looking for correlations between users' levels of self-esteem, purchasing behavior and demographics.

Understanding the users' perspective is sociologically valuable for noticing how Instagram users relate to the phenomenon, but also how they observe the effects of such interactions within the surrounding online society. Moreover, testing the possible association relations with purchasing behavior is beneficial in creating a theoretical foundation, which can be further developed through research to help optimize the online marketing processes of companies and stakeholders involved in the influencer marketing business.

More specifically, the thesis explores the state of awareness towards the phenomenon of social comparison with influencers and celebrities amongst Instagram users, their perceptions of the effects of social comparison with influencers and celebrities on well-being, and the correlations between respondents' self-esteem levels when making a buying decision, purchasing behavior and demographics. Thereby, to address the study goal, three research questions with their specific dimensions and indicators have been designed:

Q1: To what extent are Instagram users aware of the phenomenon of social comparison with influencers and celebrities? (Awareness of the phenomenon of social comparison with influencers and celebrities)

Level of Instagram usage: How often do Instagram users engage with the social platform?

Perception of the phenomenon: Do Instagram users think it is common for people to compare themselves to influencers and celebrities on Instagram?

Social behavior: Do Instagram users compare themselves to influencers or celebrities on the social platform?

Q2: Do Instagram users consider the effects of social comparison with influencers and celebrities negatively affect their well-being? (Perception of the impact of social comparison with influencers and celebrities on well-being)

Perception of impact: Do Instagram users think comparing themselves to influencers and celebrities on Instagram can bring a sense of unhappiness?

Emotional response: Do Instagram users ever feel insecure about themselves after seeing an influencer or celebrity's post on Instagram?

Perception of pressure: Do Instagram users ever feel pressure to live up to the standards set by influencers and celebrities on Instagram?

Q3: Does a correlation exist between Instagram users' self-esteem level, their purchasing behavior and their demographic particularities? (Correlation between self-esteem level, purchasing behavior and demographic particularities)

Consuming behavior: Do Instagram users buy products influencers and celebrities promote on the social platform? If so, how often?

Emotional trigger: What is the perceived level of self-esteem when the users surveyed make a buying decision?

Emotional response: How do consumers feel after making a purchase decision based on products promoted by influencers or celebrities on Instagram?

The study's research methodology is based on a quantitative research method, embodied by an online survey with close-ended questions (so that the data will be purely quantitative) administered to Instagram users between 18 and 30 years old. Further, part of the sampled data is statistically analyzed using R Studio software in order to confirm/infirm

the existence of association relations and correlations between the variables relevant to the present study.

When it comes to the reason behind choosing a quantitative research method, it lies in the intricacy of performing a qualitative analysis over a relatively large set of data while also trying to avoid subjectivism as a sole researcher. Moreover, most of the study participants were non-native English speakers, which could have caused linguistic inconsistencies in the accuracy of the answers to open-ended questions. At the same time, by formulating with specificity all of the questions for the disseminated questionnaire as close-ended, by their very nature, they confer more accurate, quantifiable data on the frequency of a particular attitude within the selected sample, facilitating the development of critical views on the population. Furthermore, this type of data enables the undertaking of subsequent statistical analysis. Nevertheless, as for the targeted environment for observing the phenomenon, Instagram has been chosen as it is one of the leading online social media platforms for disseminating promotional content by celebrities and influencers.

In regard to the thesis structure, it is divided into one introductory chapter, two theoretical chapters ("1. A brief overview of Social Comparison with influencers and celebrities", and "2. The effects of Social Comparison on Self-esteem & Purchasing Behavior"), the first one representing a brief opening to the subject and the second one being larger, furtherly divided into three sub-chapters ("2.1. Influencers/Celebrities' Characteristics & Purchasing Behavior", "2.2. What about Brand Characteristics?", "2.3. Social Comparison – a catalyst for the effects of social media influencers on consumers' Self-esteem & Purchasing Behavior"), a chapter dedicated to study methodology and data analysis ("3. Methodology and Data Analysis"), divided as well into three sub-chapters ("3.1. Study methodology", "3.2. Data Analysis – Descriptive Analysis", "3.3. Data Analysis – Statistical Analysis"), and a concluding chapter.

As for the difficulties encountered during the development of the investigation, they can be identified from several directions:

- The lack of a solid theoretical framework regarding the multidirectional relations between social comparison, the level of self-esteem and the purchasing behavior of Instagram users;
- The infeasibility of generalizing the results at the research universe level due to the non-representativeness of the studied sample;
- The possible occurrence of errors caused by the researcher's subjectivism during the descriptive analysis of the data.

1. A BRIEF OVERVIEW OF SOCIAL COMPARISON WITH INFLUENCERS AND CELEBRITIES

Social comparison represents a highly debated topic nowadays. As Crusius et al. describe it, social comparison is "a fundamental mechanism influencing people's judgments, experiences, and behavior" (2022, p. 1). People constantly relate who they are and what they do to others, whether it's about how they look, how they act or what they achieve in life (Crusius et al., 2022). Scholars also stress that when there is a lack of objective self-evaluation measures, people will tend to self-evaluate by comparing themselves to others (Pedalino & Camerini, 2022, pp. 2–3).

The phenomenon of social comparison gets even more prominent on social media, where it can have visible consequences on how people act and react. More than that, "social networks such as Facebook and Instagram not only provide many opportunities to compare with others but also confront people with a biased view on social reality" (Crusius et al., 2022, p. 15). The distorted perspective of social reality that people might create for themselves on social media platforms such as Instagram can lead to feelings of inadequacy (Pedalino & Camerini, 2022, p. 2). Due to the social nature of human beings, these feelings of inadequacy may trigger a "snowball effect" that can affect users' emotional states and attitudes. Social platforms' users start to see others' realities as their own and start to worship those persons in an attempt to mimic their reality in their own lives. This behavior becomes even more pronounced among materialistic people trying to fill a void in their lives (Yeik et al., 2022, p. 237). The same researchers also consider that "materialistic people could be attracted to superficiality and ostentatious consumption and be less concerned by the trustworthiness and expertise of the source" (Yeik et al., 2022, p. 237), which raises the importance of a better understanding of the phenomenon and its outcomes.

2. THE EFFECTS OF SOCIAL COMPARISON ON SELF-ESTEEM & PURCHASING BEHAVIOR

2.1. Influencers/Celebrities' Characteristics & Purchasing Behavior

One of the most encountered situations of social comparison on social media is the one between mere users and celebrities or influencers. But why the separation of terms? In the academic literature, influencers are seen as persons who act as role models and trendsetters in a particular niche and who have a rich network of followers (Jin et al., 2019, p. 569). In contrast, online celebrities can range from actors and singers to micro-celebrities, who are just ordinary social media users who have built up a more extensive network of online followers by narrating their lifestyles (Jin et al., 2019, p. 569). But what they all have in common is that they often get involved in the online promotion of brands and products (Jin et al., 2019, p. 569).

When it comes to the social comparison that occurs between influencers/celebrities and mere social media users, certain factors dictate the intensity level of the social comparison outcomes, depending on both the influencer/celebrity and the user characteristics. These outcomes can also be seen through users' attitudes toward product endorsement and through their purchasing behavior. Researchers argue that the rise in the number of social media influencers is one of the most impactful factors in the past few decades on purchasing behavior – "Influencers cultivate relationships with their audience via SNS platforms, such as YouTube, Facebook and Instagram, by presenting their opinions after testing products or brands and organizing events (giveaways, discounts) to promote or give advice about endorsed products" (Dinh & Lee, 2021, p. 347).

Furthermore, studies have shown that certain characteristics of celebrities and influencers can raise or decrease the promoted content's impact on social media users. Research carried out by Ata et al. shows "that influencer credibility is a critical cue in terms of fostering consumers' positive perceptions towards advertisements" (2022; p. 15). The same study found that also the influencer's trustworthiness, attractiveness, and expertise "have a positive effect on the attitude towards the advertisement, while the attitude towards the advertisement had no effect on the purchase intention" (Ata et al., 2022, p. 2). Another research conducted by Ao et al. states that what actually "impacts purchase intention more than any other attribute" is the influencers' credibility (2020, p. 1).

“Results revealed that SMI [Social Media Influencers] attributes have moderate to high associations with both purchase intention and customer engagement. As customers are highly active on social media platforms and follow digital influencers, practitioners are advised to tap these influencers to engage customers and create intentions to purchase their products” (Ao et al., 2020, p. 11).

Other studies that support the perspective of credibility as being the most important factor in impacting the attitude and purchasing behavior of social media users are the one undertaken on Instagram, regarding the Indonesian company Wardah, by Saputra et al. (2019), and the one conducted on the Spanish Instagram environment, on generations Z and Y, by Herrando and Martín-De Hoyos, a study that also brings under discussion the concept of infotainment. The researchers in question state that "users who attribute infotainment and credibility to an influencer ad post perceive the post to have greater ad value" (Herrando & Martín-De Hoyos, 2022, p. 2295). Therefore, "enhancing the infotainment and credibility of an influencer endorsement post increases the post's ad value" (Herrando & Martín-De Hoyos, 2022, p. 2296). At the same time, it is important for the influencer to be an expert in promoting that type of merchandise, according to a study carried out by Trivedi and Sama on electronic products (2020, p. 114).

While talking about social comparison on social media, a great role is played by fashion influencers and the endorsement of fashion products. Research undertaken on Instagram by Tahirah et al. found the likability of the influencer to be the key factor in impacting the "purchase intention towards fashion products" (2020, p. 2595). The same study reveals an essential distinction in terms of the generated impact between influencers' organic posts and paid sponsored advertising, considering the first ones as more trustworthy and credible (2020, p. 2595). Nevertheless, scholars note that social media consumers tend to purchase more familiar products from their favorite influencers (Tahirah et al., 2020, p. 2595).

Another study carried out on fashion influencers' impact underlines, once again, credibility as "the major factor persuading attitudes toward the influencer, followed by expertise and trust" (Youssef & Lebdaoui, 2020, p. 14). The results of the research in question also show that fashion influencers "perceived as credible and trustworthy are more likely to influence followers' attitudes and purchase intention" (Youssef & Lebdaoui, 2020, p. 14).

Last but not least, another essential concept brought up by scholars regarding the relationship between the characteristics of social media influencers and their impact on users is the one of loyalty: "the results of mediation research revealed that the more loyal customers

are to SMIs, the more likely they are to be inspired to adopt as social defaults the examples offered by SMIs, including their lifestyle, style, suggestions, and recommendations" (Chan, 2022, p. 112).

Finally, the study carried out by Al Kurdi et al. stresses that the whole set of influencer characteristics has a substantial impact on the attitude and purchasing behavior of social media consumers (2022, p. 1144).

2.2. What about Brand Characteristics?

An essential part of product endorsement on social media is also represented by the characteristics of the promoted brand itself. Among the results of a study carried out by Hasan and Sohail, "brand trust, brand community, brand awareness and interaction were found to influence purchase intention" (2020, p. 1). Another study, conducted by Patmawati and Miswanto, sees brand awareness as a key factor in mediating the effect of social media influencers on consumer purchase intention (2022, p. 181). Moreover, researchers found a correlation "between brand loyalty and consumer purchasing intention" (Mookda et al., 2020, p. 1018). This correlation is the result of brand loyalty being a mediating factor in "the relationship between celebrity endorsement and consumer purchasing intention" (Mookda et al., 2020, p. 1018), therefore, interconnecting the three concepts.

The correlation between brand perceptions and influencer characteristics goes both ways, as shown in the Youssef and Lebdaoui study:

"It has been illustrated that a large share of the variation in the attitude toward the brand comes from attitudes toward FIs. This implies that consumers are more likely to appreciate or recommend a brand that has been recommended by popular influencers" (2020, p. 14).

The relations dimension can grow to a greater extent while including other adjacent factors, such as the disclosure of a paid partnership. In this regard, scholars found that "paid partnership disclosure had positive outcomes for purchase intention and intention toward the SMI [Social Media Influencers]" (Balaban et al., 2022, p. 1), due to an increase in trustworthiness and transparency.

Nevertheless, what plays a role in influencing the most important characteristic of an influencer, credibility, is the prior brand attitude. Thus, Lin et al. claim that prior brand attitude is not only "positively related to consumer evaluation of influencer credibility" (2021, p. 55), but it also has a strong influence on the users' perceptions of influencers'

credibility (2021, p. 68). Moreover, the results of the same study also “indicate that both PSI [Parasocial Interaction] and source credibility play an important role in directly and/or indirectly impacting brand attitude and purchase intention in the context of digital marketing, as driven by social media influencers” (Lin et al., 2021, p. 68), emphasizing once again the multidirectional influence of the concepts in question on each other.

2.3. Social Comparison – a catalyst for the effects of social media influencers on consumers’ Self-esteem & Purchasing Behavior

“Negative social comparison to the image presented by influencers is positively associated with consumers’ impulse buying” (Mundel et al., 2023, p. 1). This abrupt statement stems from the vicious circle the researchers discovered in the study. Exposure to social media and the social comparison that comes with it is unavoidable, making users susceptible to impulsive buying decisions (Mundel et al., 2023, p. 11). The study also shows “that exposure to influencer marketing is negatively associated with consumer well-being” (Mundel et al., 2023, p. 11), which paves the way for further discussion of the phenomenon in both mental well-being and academic settings.

Scholars came up with a term for describing the process of social comparison with celebrities – upward social comparison. The phenomenon can be presented as the comparison with people seen as superior to the person in question, a comparison that can lead to feelings of inferiority (Tran et al., 2022, p. 4). Moreover, the same scholars confirm “that self-esteem moderates the direct and indirect effect of upward social comparison on impulse buying” (Tran et al., 2022, p. 11). More concretely, “lower self-esteem users will engage in impulse buying stronger than the higher self-esteem” (Tran et al., 2022, p. 11).

Research also talks about the mediating effect of envy on the phenomenon: “The higher envy the greater buying intention among male consumers” (Jin & Ryu, 2020, p. 11). At the same time, the study carried out by Tran et al. found that “the effect of benign envy on impulse buying is more robust with those who have a high degree of self-esteem” (Tran et al., 2022, p. 11). The scholars explain their findings as a result of the self-improvement desire caused by benign envy, which causes individuals to want to reach the standards of those envied (Tran et al., 2022, p. 11).

3. METHODOLOGY AND DATA ANALYSIS

3.1. Study methodology

The study methodology relies on a quantitative method, materialized through an online survey administered to Instagram users aged 18 to 30. This specific methodology was chosen to understand users' perspectives better while subsequently performing a descriptive analysis. Moreover, the variables corresponding to the third research question and the demographic data were statistically analyzed using R Studio software, looking for correlations between them.

The designed questionnaire had four sections, three of them corresponding to the research questions and a fourth one used to gather demographic data. The formulated questions had closed-ended answers, so the data provided would be purely quantitative. In addition, they had their answer options mainly based on Likert scales in order to measure the respondents' attitudes and their strength.

The survey was spread using a non-probability sampling method and distributed among the researcher's acquaintances and students of Pompeu Fabra University (via Instagram stories and WhatsApp messages). Hence, the results present the opinions and attitudes of a homogeneous population and cannot be generalized among the entire population of young Instagram users aged 18 to 30. The data collection spanned 16 days (May 23rd, 2023 - June 8th, 2023). Over that time, the initial set threshold of a minimum of 100 responses was reached (with a total of 101 answers collected) so that one percent can be related to the answer of at least one person.

Subsequently, in R Studio, a statistical analysis was carried out to see if there were any association relations between the following variables:

- The respondents' self-esteem level when making a purchasing decision and their gender;
- The respondents' self-esteem level when making a purchasing decision and their age;
- The respondents' self-esteem level when making a purchasing decision and their occupation;

The respondents' self-esteem level when making a purchase decision and the frequency with which they make these purchasing decisions.

3.2. Data Analysis – Descriptive Analysis

The online administered questionnaire was designed within the Google Forms platform and started with the informed consent for respondents. In terms of the four existing sections, the first three correspond to the research questions, and the fourth one is designed to provide the demographic data needed for the statistical analysis. It is therefore important to note, first of all, that 68.3% of respondents identified themselves with the female gender, 80.2% of them were aged between 18 and 24, and more than three quarters were students.

Figure 1

Gender:
101 responses

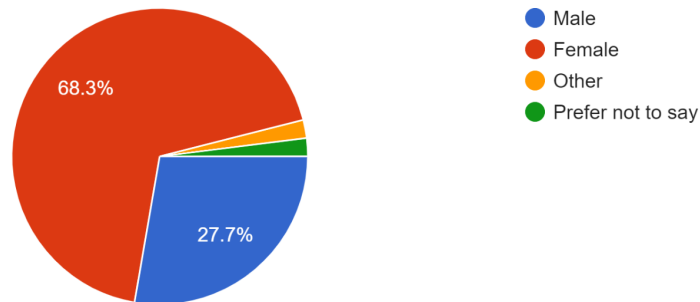


Figure 2

Age range:
101 responses

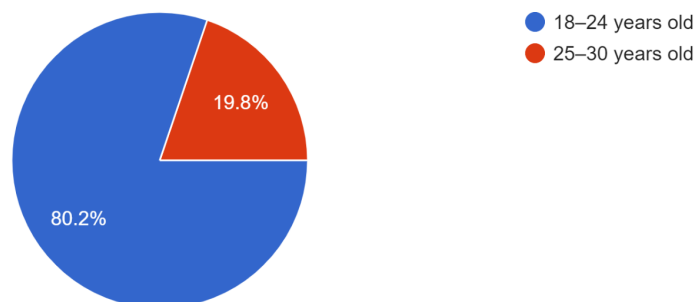
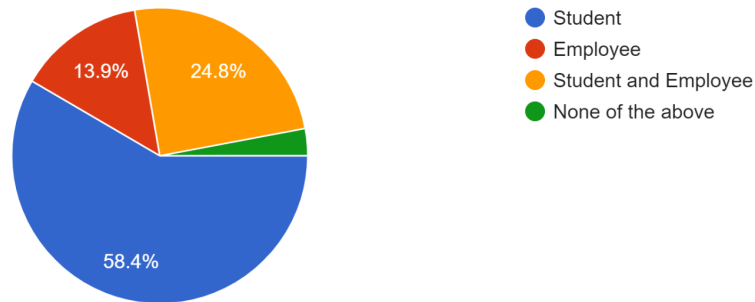


Figure 3

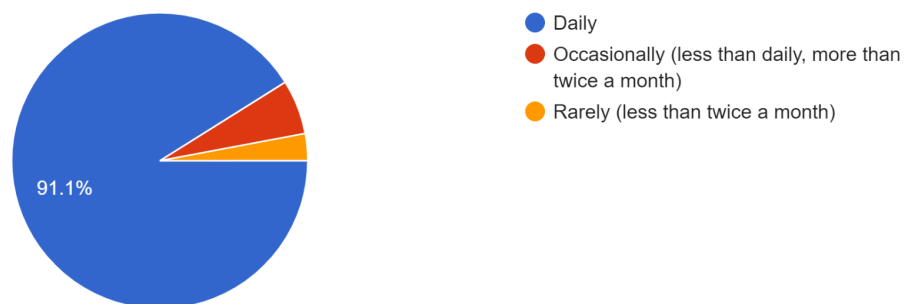
Occupation:
101 responses



The first section of the form, "Instagram & Social Comparison", starts with a question that aims to find out the level of Instagram usage of the participants in order to test their familiarity with the topic. It can be noted that more than 90% of the respondents answered that they use the Instagram platform on a daily basis, which means that a certain degree of familiarity with the approached theme exists, and their opinions denote relevance.

Figure 4

How often do you use Instagram?
101 responses



When asked the second question, "To what extent do you agree with the following statement? "It is common for people to compare themselves to influencers and celebrities on Instagram", over 80% of respondents pointed out that they fully or partially agreed with the

above statement. Interestingly enough, when asked about their own experience with this phenomenon, only 58.5% of respondents said they sometimes or always compare themselves to influencers or celebrities on Instagram. This can be explained by *The Third Person Effect*, a theory that "proposes that people tend to perceive mass communication as having a stronger effect on others than on themselves" (Liu et al., 2021, p. 4339).

Figure 5

To what extent do you agree with the following statement? "It is common for people to compare themselves to influencers and celebrities on Instagram."

101 responses

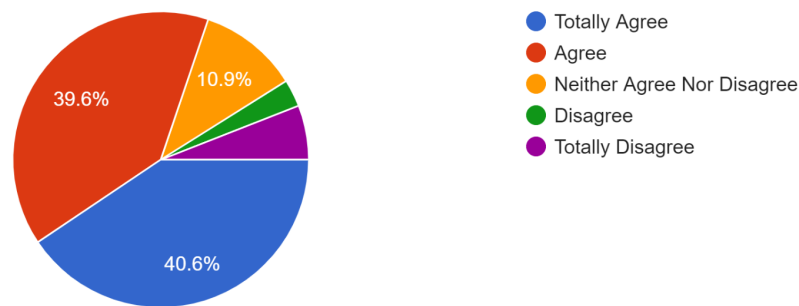
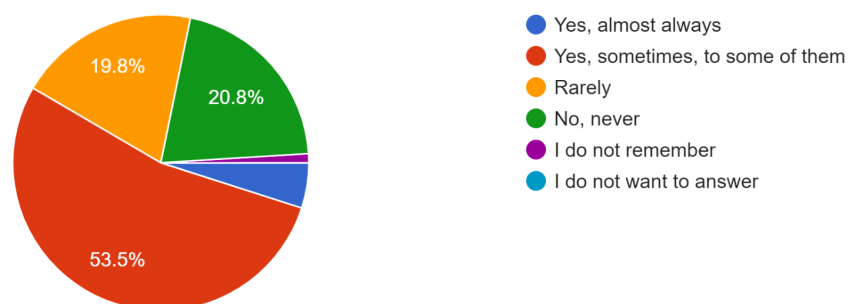


Figure 6

Do you ever compare yourself to influencers or celebrities on Instagram?

101 responses



In the second section of the survey, "Social Comparison & Self-esteem", the participants were asked if they think that "Comparing yourself to influencers and celebrities

on Instagram can bring a sense of unhappiness". An overwhelming majority of more than 90% stressed that they agreed, at least to some extent, with the statement in question. As for the second question, over 70.3% of individuals surveyed said they feel insecure about themselves after seeing a famous person's post on Instagram. However, to the same question, over 20% of respondents denied ever feeling this way. For the third question of the section, where participants were asked if they ever feel pressure to live up to the standards set by influencers and celebrities on Instagram, the distribution of respondents' attitudes among the "Yes, sometimes", "Rarely", and "No, never" answer options was similar, with almost 30% of the percentages attributed to the "No, never" option, a finding that can either be explained again through *The Third Person Effect* or it may just be a specific trait of the questioned group, considering its homogeneity.

Figure 7

To what extent do you agree with the following statement? "Comparing yourself to influencers and celebrities on Instagram can bring a sense of unhappiness."

101 responses

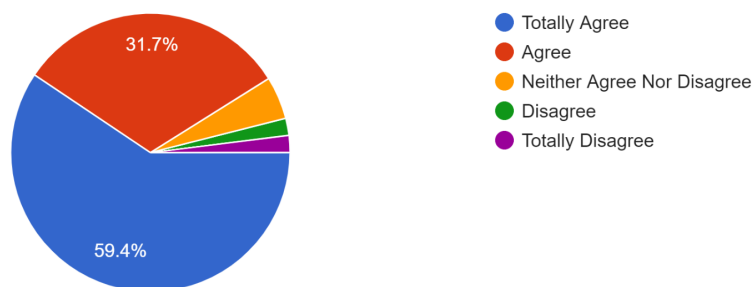


Figure 8

Do you ever feel insecure about yourself after seeing an influencer or celebrity's post on Instagram?

101 responses

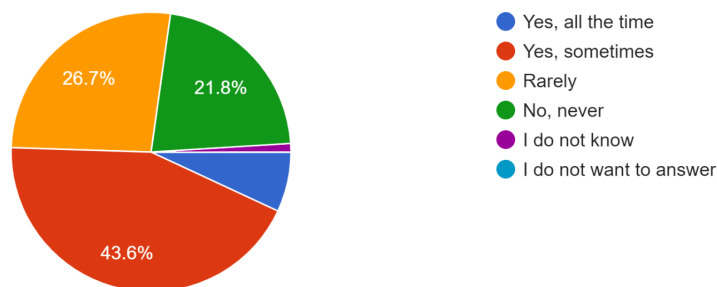
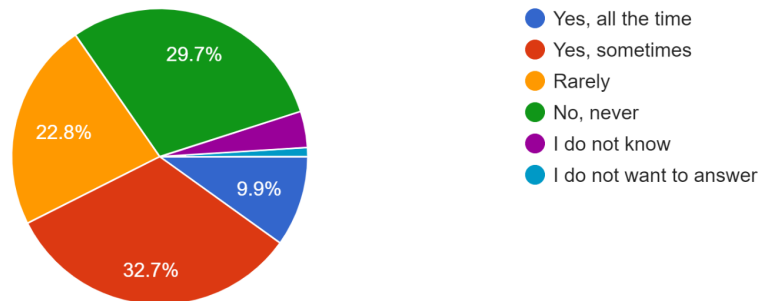


Figure 9

Do you ever feel pressure to live up to the standards set by influencers and celebrities on Instagram?

101 responses

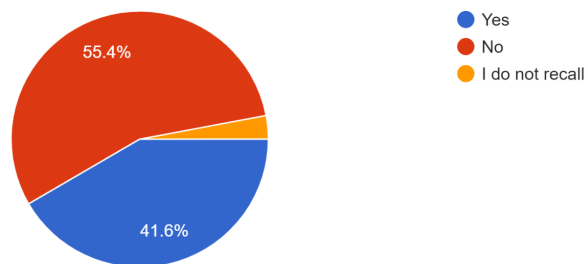


The third section of the questionnaire, "Self-esteem level and Purchasing Behavior", starts with a filter question with the aim to see if the surveyed individuals ever buy products influencers and celebrities promote on Instagram. Interestingly, although the interviewed audience is young, aged between 18 and 30, and uses the platform daily, a large proportion of them, 55,4%, never buys products endorsed by influencers and celebrities in this environment, which can be attributed to the exclusive use of the social platform for communication and entertainment or the lack of credibility of the famous people present on it (further studies should be undertaken to determine the exact cause). Another factor that may have contributed to the result is a lower purchasing power among the respondents, considering that 80% of them belong to the age category between 18 and 24 years, and 58,4% are non-employed students.

Figure 10

Do you ever buy products influencers and celebrities promote on Instagram?

101 responses

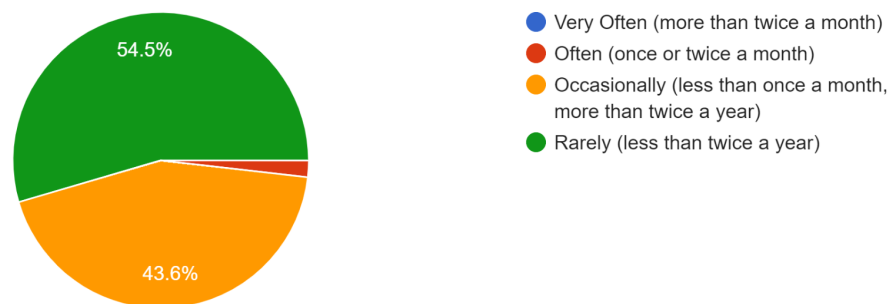


Even among those who make purchasing decisions after viewing a product promoted on Instagram by a celebrity, few do so frequently, with 30 respondents and 24 respondents, respectively, stating that they rarely (less than twice a year) or occasionally (less than once a month, more than twice a year) buy the products in question. None of the respondents said that he/she/they buys the endorsed products more than twice a month. So even though exposure to promotional posts endorsed by celebrities on Instagram is frequent, it rarely leads to a buying decision.

Figure 11

If yes, how often do you buy them? (If not, skip to the next section)

55 responses

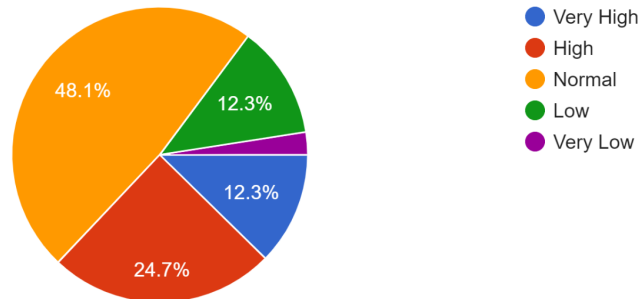


In terms of respondents' level of self-esteem when making a purchasing decision, almost half of them answered that it is a normal one. Contrary to common intuition, the next highest percentage of responses is attributed to those who said that their level of self-esteem when making a purchasing decision is high or very high. This phenomenon can be accounted for through the theory of Tran et al., which states that “the effect of benign envy on impulse buying is more robust with those who have a high degree of self-esteem” (Tran et al., 2022, p. 11). The same research further explained its finding as a result of the self-improvement desire caused by benign envy, which causes individuals to want to reach the standards of those envied (Tran et al., 2022, p. 11).

Figure 12

How do you perceive your level of self-esteem when making a buying decision?

81 responses

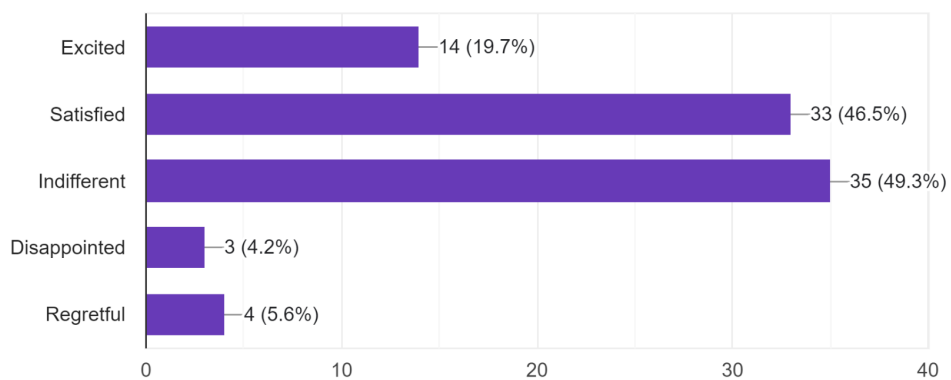


Nevertheless, the majority said that they feel indifferent, satisfied or even excited after making a purchasing decision, which could translate into an absence of negative feelings following the purchase of promoted products.

Figure 13

How do you feel after making a purchase decision based on products promoted by influencers or celebrities on Instagram? (multiple-choice possible)

71 responses



3.3. Data Analysis – Statistical Analysis

The statistical analysis undertaken using R Studio first utilized the Chi-Square test of independence to examine the possible correlations between the variable corresponding to the level of self-esteem when making a purchasing decision and the variables corresponding to gender, age range and occupation, respectively. The test in question was chosen as an appropriate one for the analysis due to the fact that it is specifically designed to examine the association between two categorical variables: self-esteem level, analyzed on a Likert scale whose items correspond to categories, and gender, age range and occupation, which by their intrinsic nature are nominal.

For the Chi-Square tests performed, the following hypotheses were developed:

1. For the correlation between the respondents' level of self-esteem when making a purchasing decision and their gender:
 - Null Hypothesis (H_0): There is no association between the respondents' level of self-esteem when making a purchasing decision and their gender;
 - Alternative Hypothesis (H_1): There is an association between the respondents' level of self-esteem when making a purchasing decision and their gender.

2. For the correlation between the respondents' level of self-esteem when making a purchasing decision and their age range:
 - Null Hypothesis (H_0): There is no association between the respondents' level of self-esteem when making a purchasing decision and their age range;
 - Alternative Hypothesis (H_1): There is an association between the respondents' level of self-esteem when making a purchasing decision and their age range.

3. For the correlation between the respondents' level of self-esteem when making a purchasing decision and their occupation:
 - Null Hypothesis (H_0): There is no association between the respondents' level of self-esteem when making a purchasing decision and their occupation;
 - Alternative Hypothesis (H_1): There is an association between the respondents' level of self-esteem when making a purchasing decision and their occupation.

In all three cases, the calculated p-value was greater than the significance level, which is equal to 0,05 (see results in Table 1), so the Alternative Hypothesis (H_1) was rejected, and the Null Hypothesis (H_0) was accepted. Therefore, there is no association between the

respondents' level of self-esteem when making a purchasing decision and their gender, age range or occupation.

Table 1

Chi-Square independence test

	Self-esteem level
Gender	p-value=0,18
Age range	p-value=0,64
Occupation	p-value=0,21

Since the sample studied is relatively small, the Chi-Square test can become less reliable since it is an approximate test. Thereby, Fisher's exact test was also undertaken to test the three hypotheses (it provides an exact p-value and does not rely on any asymptotic approximation).

Once again, in all three cases, the calculated p-value was greater than the standard p-value (see results in Table 2), so the Alternative Hypothesis (H_1) was rejected, and the Null Hypothesis (H_0) was accepted. Therefore, Fisher's exact test confirmed that there is no association between the respondents' level of self-esteem when making a purchasing decision and their gender, age range or occupation.

Table 2

Fisher's exact test

	Self-esteem level
Gender	p-value=0,19
Age range	p-value=0,54
Occupation	p-value=0,21

The last statistical analysis undertaken sought to observe whether there was a correlation between the respondents' level of self-esteem when making a purchasing decision and the frequency with which they buy products promoted by influencers and celebrities on Instagram (purchasing behavior). For the present analysis, Spearman's rank correlation coefficient was chosen to be tested. The reason for choosing Spearman's rank correlation over Pearson's rank correlation is that the present variables are measured on Likert scales, which are generally considered ordinal scales, meaning that the response categories have a specific order but do not necessarily have equal intervals between them. Meanwhile, Pearson's rank correlation assumes that the variables are measured on a continuous scale.

Thus, for the test in question, the first two hypotheses were formulated to see if the coefficient is or is not statistically significant:

- Null Hypothesis (H_0): Spearman's rank correlation coefficient is not statistically significant;
- Alternative Hypothesis (H_1): Spearman's rank correlation coefficient is statistically significant.

The calculated p-value (0,07) turned out to be greater than the standard p-value (0,05), so the Alternative Hypothesis (H_1) was rejected, and the Null Hypothesis (H_0) was accepted. As the coefficient is not statistically significant, no hypotheses have been further developed to interpret its value. This finding does not mean that a weak or subtle correlation between the respondents' level of self-esteem when making a purchasing decision and the frequency with which they buy products promoted by influencers and celebrities on Instagram could not exist, but only that it can not be detected with the available data due to factors such as the small sample size.

CONCLUSIONS AND LIMITATIONS OF THE STUDY

The study aimed to explore the state of awareness towards the phenomenon of social comparison with influencers and celebrities amongst Instagram users, their perceptions of the effects of social comparison with influencers and celebrities on well-being, and the correlations between respondents' self-esteem levels when making a buying decision, purchasing behavior and demographics. By doing so, three research questions with their specific dimensions and indicators were designed:

Q1: To what extent are Instagram users aware of the phenomenon of social comparison with influencers and celebrities?

- Level of Instagram usage;
- Perception of the phenomenon;
- Social behavior.

Q2: Do Instagram users consider the effects of social comparison with influencers and celebrities negatively affect their well-being?

- Perception of impact;
- Emotional response;
- Perception of pressure.

Q3: Does a correlation exist between Instagram users' self-esteem level, their purchasing behavior and their demographic particularities?

- Consuming behavior;
- Emotional trigger;
- Emotional response.

Following the descriptive analysis performed, it was found that the majority of the surveyed participants use the Instagram platform on a daily basis, and hence their opinions and attitudes towards the phenomenon are relevant to the present study. Also, since more than 80% of them stated that they agree with the fact that "It is common for people to compare themselves to influencers and celebrities on Instagram", the first research question formulated

by the thesis is affirmatively answered: Yes, Instagram users are aware of the phenomenon of social comparison with influencers and celebrities. On the other hand, within the same section of the descriptive analysis, it was demonstrated that the thing that not all of the interviewed respondents are aware of is that they are also impacted to an equal extent by the phenomenon, a fact explained through the existence of *The Third Person Effect*.

Analysis of the second section of the administered questionnaire confirms Pedalino and Camerini's theory that social platforms such as Instagram can trigger, through social comparison, feelings of inadequacy in their users (2022, p. 2), conveyed as unhappiness. The influence of *The Third Person Effect* can as well be felt throughout the answers given in this section. This is because, in the case of the questions asked to the participants of the study about themselves, the number of those who feel insecure after seeing a famous person's post on Instagram and the one of those who feel pressure to live up to the standards set by influencers and celebrities on Instagram is lower than the number of those who agree, on a general level, that "Comparing yourself to influencers and celebrities on Instagram can bring a sense of unhappiness". Of course, other factors could have played a role in the explanation for the decrease in the number of affirmative responses regarding the impact felt by Instagram users on themselves as a result of social comparison. But as the research question that the present study aims to answer is about the study participants' opinions and does not examine the objective reality, it can be asserted that Instagram users consider the effects of social comparison with influencers and celebrities to negatively affect their well-being to a certain extent. Therefore, the spectrum of their opinions varies from a predominantly approving attitude regarding the general effect of the phenomenon on society to a partially approving attitude regarding the impact felt by the surveyed population on their own attitudes and behaviors.

Statistical analysis undertaken to address the third research question noted that there are no correlations or association relations between Instagram users' self-esteem level, their purchasing behavior and their demographic particularities, but its limitations can be explained by the relatively small-sized and homogeneous sample. Consequently, the findings of Tran et al. regarding the existence of a correlation between self-esteem and impulsive buying behavior (2022, p. 11) can neither be confirmed nor refuted. Further extensive studies should be undertaken to examine the multidirectionality of the phenomenon better.

Meanwhile, the descriptive analysis carried out to address the third research objective observed a few matters relevant to the advancement of knowledge in the research field. One of these is that most interviewees never buy products promoted by influencers and celebrities

on Instagram, and those who do, do so rarely or occasionally. This finding somewhat contradicts Dinh and Lee's theory stating that the rise in the number of social media influencers is one of the most impactful factors in the past few decades on purchasing behavior (2021, p. 347). Although the existence of an impact has been previously confirmed, its high intensity remains unconfirmed by the present study. Also, the majority of study participants claimed that they feel indifferent, satisfied or even excited after making a purchasing decision, which to some extent contradicts the finding of Mundel et al., which states that "exposure to influencer marketing is negatively associated with consumer well-being" (2023, p. 11). So the present study demonstrates that Instagram users' exposure to promotional content advertised by influencers is not necessarily associated with negative feelings in terms of their well-being, at least not on a short-term basis. To observe the long-term effects of exposure to influencer marketing, extensive longitudinal studies need to be conducted.

Nevertheless, the study has certain limitations, and they consist not only in the survey administration to a relatively small and homogeneous population but also in the fact that the study in question presents an analysis of Instagram users' perceptions, thus, being subjective to their own views and beliefs. For a holistic overview of the phenomenon, extensive studies should be conducted, such as qualitative or mixed-method research using content analysis on influencers' and celebrities' posts, or even experiments on how people react with regard to seen content when it comes to their self-esteem levels and purchasing behavior.

Lastly, in terms of research ethics, the study's participants' answers to the survey were completely anonymized, their participation was voluntary, and they also had the right to withdraw from the study at any time without consequences (see "The informed consent of the administered survey" in the Appendix).

REFERENCES

- Al Kurdi, B., Alshurideh, M., Akour, I., Tariq, E., AlHamad, A., & Alzoubi, H. (2022). The effect of social media influencers' characteristics on consumer intention and attitude toward Keto products purchase intention. *International Journal of Data and Network Science*, 6, 1135–1146. <https://doi.org/10.5267/j.ijdns.2022.7.006>
- Ao, L., Bansal, R., Pruthi, N., & Khaskheli, M. B. (2023). Impact of social media influencers on customer engagement and purchase intention: A meta-analysis. *Sustainability*, 15(3), 2744. <https://doi.org/10.3390/su15032744>
- Ata, S., Arslan, H., Baydaş, A., & Pazvant, E. (2022). The effect of social media influencers' credibility on consumers' purchase intentions through attitude toward advertisement. *ESIC MARKET Economic and Business Journal*, 53, 280–299.
- Balaban, D., Mucundorfeanu, M., & Naderer, B. (2022). The role of trustworthiness in social media influencer advertising: Investigating users' appreciation of advertising transparency and its effects. *Communications*, 47(1), 79–99. <https://doi.org/10.1515/commun-2020-0053>
- Chan, F. (2022). A study of social media influencers and impact on consumer buying behavior in the United Kingdom. *International Journal of Business & Management Studies*, 3(7), 79–134.
- Crusius, J., Corcoran, K., & Mussweiler, T. (2022). Social comparison: A review of theory, research, and applications. In T. Mussweiler (Ed.), *Theories in Social Psychology* (2nd ed., pp. 165–187). Wiley.
- Dinh, T. C. T., & Lee, Y. (2022). "I want to be as trendy as influencers" – how "fear of missing out" leads to buying intention for products endorsed by social media influencers. *Journal of Research in Interactive Marketing*, 16(3), 346–364. <https://doi.org/10.1108/JRIM-04-2021-0127>
- Hasan, M., & Sohail, M. S. (2020). The influence of social media marketing on consumers' purchase decision: Investigating the effects of local and nonlocal brands. *Journal of International Consumer Marketing*, 33(1), 33–49. <https://doi.org/10.1080/08961530.2020.1795043>

- Herrando, C., & Martín-De Hoyos, M. J. (2022). Influencer endorsement posts and their effects on advertising attitudes and purchase intentions. *International Journal of Consumer Studies*, 46(1), 56–67. <https://doi.org/10.1111/ijcs.12785>
- Jin, S. V., Muqaddam, A., & Ryu, E. (2019). Instafamous and social media influencer marketing. *Marketing Intelligence & Planning*, 37(5), 567–579. <https://doi.org/10.1108/MIP-09-2018-0375>
- Jin, S., & Ryu, E. (2020). "I'll buy what she's #wearing": The roles of envy toward and parasocial interaction with influencers in Instagram celebrity-based brand endorsement and social commerce. *Journal of Retailing and Consumer Services*, 55, 102121.
- Liu, X., Lo, V.-H., Wei, R., Li, X., Pang, S., & Zhang, R. (2021). Media exposure and third-person perception: The mediating role of social realism and proxy efficacy. *International Journal of Communication*, 15, 4338–4359. <http://ijoc.org/10.22031/IJOC.2021.727946>
- Lin, C., Crowe, J., Pierre, L., & Yang, Y. (2021). Effects of parasocial interaction with an Instafamous influencer on brand attitudes and purchase intentions. *Computers in Human Behavior*, 126, 106952.
- Mookda, R., Khan, S., Intasuwan, S., & Chotchoung, S. (2020). The effect of celebrity endorsement on consumer purchase intention: The mediating role of brand loyalty. *International Journal of Scientific and Research Publications (IJSRP)*, 10(6), 1016–1021.
- Mundel, J., Wan, A., & Yang, J. (2023). Processes underlying social comparison with influencers and subsequent impulsive buying: The roles of social anxiety and social media addiction. *Journal of Marketing Communications*, 29(1), 55–78.
- Patmawati, D., & Miswanto, M. (2022). The effect of social media influencers on purchase intention: The role of brand awareness as a mediator. *International Journal of Entrepreneurship and Business Management*, 1(2), 170–183. <https://doi.org/10.54099/ijebm.v1i2.374>
- Pedalino, F., & Camerini, A.-L. (2022). Instagram use and body dissatisfaction: The mediating role of upward social comparison with peers and influencers among young females. *International Journal of Environmental Research and Public Health*, 19(3), 1543. <https://doi.org/10.3390/ijerph19031543>
- Saputra, R. A., Suharjo, B., & Sukandar D. (2019). Exploring the impact of celebrity endorsements on attitudes and purchasing intention on Instagram. *Indonesian Journal*

- of Business and Entrepreneurship (IJBE)*, 5(2), 107–120.
<https://doi.org/10.17358/ijbe.5.2.107>
- Tahirah, A., Siti, N. S. D., Siti, A. Z., Nur, F. A., Siti, S. A., Nur, I. M. A., Siti, R. M., Wan, F. W. Z., Nik, A. A. N. H., Ahmad, R. A., Aikal, L. M. R., & Hazriah, H. (2020). Impact of social media influencer on Instagram user purchase intention towards the fashion products: The perspectives of students. *European Journal of Molecular & Clinical Medicine*, 7(8), 2589–2598.
- Tran, V. D., Nguyen, T., & Nguyen, D. (2022). Understanding how upward social comparison stimulates impulse buying on image-sharing social commerce platforms: A moderated mediation model of benign envy and self-esteem. *Current Psychology*, 41(1), 74–89.
<https://doi.org/10.1007/s12144-022-03042-w>
- Trivedi, J., & Sama, R. (2020). The effect of influencer marketing on consumers' brand admiration and online purchase intentions: An emerging market perspective. *Journal of Internet Commerce*, 19(2), 103–124.
<https://doi.org/10.1080/15332861.2019.1700741>
- Yeik, K. K., Cheung, M. L., Soh, P., & Teoh, C. W. (2022). Social media influencer marketing: The moderating role of materialism. *European Business Review*, 34, 224–243. <https://doi.org/10.1108/EBR-02-2021-0032>
- Youssef, C., & Lebdaoui, H. (2020). How fashion influencers contribute to consumers' purchase intention. *Journal of Fashion Marketing and Management*, 24(4), 605–620.
<https://doi.org/10.1108/JFMM-08-2019-0157>

APPENDIX

The informed consent of the administered survey.

Understanding the Impact of Social Comparison on Instagram Users' Self-esteem and Purchasing Behavior.

My name is Dragoș Bănică, and for my master's thesis at Pompeu Fabra University I am studying the Impact of Social Comparison on Instagram Users' Self-esteem and Purchasing Behavior. If you are an Instagram user, your contribution to the study by filling in the questionnaire will enable a better understanding of the phenomenon.

All data collected is anonymous. Participation in this study is voluntary, and you can withdraw at any time. If you choose to withdraw, your data will be excluded from the analysis.

By proceeding with the survey, you confirm that you have read and understood the terms of the research and that you are between 18 and 30 years old.

Estimated completion time: 2-3 minutes.