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Social Comparison Orientation and Social Media Use by Brazilian Accounting Students

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Abstract

Purpose: Social Comparison Orientation is a psychological and behavioral predisposition that is rooted in individuals' uncertainties about their own abilities and opinions. The frequent and inappropriate use of social networks, in addition to enabling social comparison, may lead to the maximization of this behavior, which is sometimes harmful to the individual. This research sought to identify how accounting students' social comparison orientation changes according to the characteristics of social media use.

Methodology: The responses were collected from an online survey of accounting students. 502 valid responses were obtained and to verify and compare social comparison orientation based on the characteristics of social media use, the statistical tests multigroup confirmatory factor analysis, and MANOVA were used.

Results or Discussion: MANOVA pointed out significant differences in the clusters of following celebrities and influencers on social media to compare abilities and opinions and in the number of friends to compare opinions.

Conclusion: The engagement with posts from influencers and celebrities related to the facets of Social Comparison Orientation (SCO) may stem from the profile of accounting professionals described in the literature, who tend to be introverted and may seek for socially accepted patterns of behavior through social media. Therefore, understanding how the characteristics of social media usage affect social comparison behavior can be valuable for promoting a more conscious use of these digital tools.

Keywords: Social media; Social comparison orientation; Accounting students; Social comparison.

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Introduction

Social media has become part of the daily life of a large part of the population, enabling users to interact using different technological devices and multiple digital platforms (Müller et al., 2020). This scenario emerged due to the development of new technological devices, cost reduction, and the improvement of the quality of data transmission, which led to the popularization and democratization of internet access in the twenty-first century. Currently, 60% of the population uses the internet, and between October 2019 and October 2020, there was an increase of 324 million new internet users globally (We Are Social & Hootsuite, 2020a).

The effects of this wave of technological inclusion have also been perceived in Brazil. In January 2020, approximately 71% of the Brazilian population was using the internet. Of this total, 66% used social media, allocating an average of 3 hours and 31 minutes daily to access this type of platform and 9 hours and 17 minutes daily to general internet use – these numbers tend to be higher for the younger population (We Are Social & Hootsuite, 2020b).

Many studies have pointed out problems related to the inappropriate use of social media, such as negative psychological and behavioral consequences such as procrastination, low perception of a fair life, and the fear of missing out (FoMO) (Chou & Edge, 2012; Müller et al., 2020).

Examples of inappropriate use of social media are the users' attitudes and the excessive time spent on these platforms. Empirical evidence shows that social comparisons through online platforms are the primary motivators of users' negative attitudes (Vogel et al., 2015). According to the literature, people with tendencies toward social comparison are more likely to present lower levels of well-being, low self-esteem, low self-confidence, and depression, among other adverse consequences (Alfasi, 2019; Chou & Edge, 2012; Kim, Schlicht, Schardt, & Florack, 2021; Lee, 2014; Wang, Wang, Gaskin, & Hawk, 2017; Yang, 2016).

Conceptually, social comparison, or social comparison orientation (SCO), derives from Festinger's (1954) theory of social comparison process and is a psychological and behavioral tendency anchored in individuals' uncertainties about their opinions and evaluation of abilities.

People with a high level of SCO show unstable self-concepts and tend to search for tools and engage in situations leading to social comparison (Gibbons & Buunk, 1999; Vogel et al., 2015). Also, the inappropriate and intense use of social media represents an immediate opportunity for social comparisons (Lee, 2014; Müller et al., 2020; Yang, 2016).

Social media allows people to build a profile to share daily habits, achievements, relationship status, and experiences using many applications (Alfasi, 2019; Vogel et al., 2015). Chou and Edge (2012) and Vogel et al. (2015) warn of the inconsistencies of making social comparisons through social media, as users tend to manage the self-image projected to society, leading the individual to believe that others are more successful and happy (Alfasi, 2019), arousing negative emotions and low levels of well-being.

On the other hand, studies found evidence that social comparison on social media can arouse positive emotions such as sympathy, admiration, and pride (Park & Baek, 2018; Smith, 2000). Amid these dissonances, it is plausible to believe that social comparison, especially in a society based on social media use, can lead to an image of an idealized person with a perfect life. This image differs from one built based on personal contact, in which subtle traits affect people's perceptions. Thus, online social comparison results in dissonant comparisons of reality (Chou & Edge, 2012).

As SCO leads to a plurality of emotions, it is important to investigate how the use of social media differentiates the level of SCO since different psychological and behavioral factors can be affected by the exacerbated use of these digital platforms. There are indications of higher levels of SCO in university students than in other sample groups, such as the adult population (Lee, 2014). Part of this specificity comes from the recurrent and copious use of social media.

This research is focused on undergraduate accounting students since the literature has suggested that SCO may affect the performance of accounting professionals (Kuselias et al., 2021) and that the consumption of content on social media can affect the opinion of auditors on the assessment of the continuity of companies (Condie & Moon, 2024).

Additionally, accounting students are more rational and less extroverted (Meier et al., 2019). The evidence accumulated in the literature indicates that these students' and professionals' personalities and behavioral profiles are marked by a lack of communication skills, sociability, and individuality (Azevedo, 2010; Leal et al., 2014; Tonin et al., 2020). Lack of extroversion is one characteristic that induces people to use social media to compensate for inappropriate offline relationships (Cramer et al., 2016). In addition, the negative emotions arising from the inability to communicate can reverberate in the use of social media to minimize the relational deficiencies experienced offline (Kardefelt-Winther, 2014).

When combined with higher levels of SCO, this scenario can lead to a vicious behavioral cycle of social media use. It is noteworthy that undergraduate students, for the most part, belong to a younger portion of the population, still forming their sense of self-image, which can be compromised by higher levels of social comparison and intensified by the characteristics of social media use (Alfasi, 2019). Data

from SEMESP (2020) indicate that most undergraduate students are in the 18 to 24 age group, both in face-to-face teaching and remote teaching. This profile reinforces the relevance of this group in research on SCO and social media.

Thus, there are indications of a possible interaction between conditioning of the SCO with the characteristics of social media use, such as the daily or weekly access time, the number of friends/followers, and the percentage of friends/followers that also develop face-to-face contact and that they consider real friends (Chou & Edge, 2012; Lee, 2014; Vogel et al., 2015), and the consumption of content from influencers and celebrities. These variables characterize the context in which the individual is immersed in terms of contacts and interaction possibilities and the frequency of use of these virtual tools.

Therefore, to observe whether the characteristics of social media use differentiate the level of SCO, the research is guided by the following research question: How does Social Comparison Orientation differ from the characteristics of social media use presented by accounting students?

Yang (2016) observed the use of Instagram and its relationship with SCO. In this research, the scope of the study is expanded to the use of social media in general, covering other important platforms, such as Facebook and WhatsApp. The objective of identifying how SCO differs from the characteristics of social media use presented by accounting students makes it possible to seek ways to mitigate social comparisons harmful to the mental health of academics and encourage the conscious use of these tools in such an important moment of their professional life.

In addition, this research addresses the lack of additional definitions for the types of use of social media (Vogel et al., 2015) and the need to understand with whom users interact and what they do in the online world (Yang, 2016). The contribution of this study by identifying elements that condition SCO through social media use helps to plan actions that mitigate such behaviors, protecting other spheres of students' lives, such as learning.

2 Social Comparison Orientation and Social Media Use

The social comparison orientation (SCO) has its theoretical bases in Festinger's (1954) theory of social comparison process, developed by studying individuals' opinions and evaluations of abilities. SCO starts from the premise that human beings are naturally motivated to make social comparisons based on an orientation aimed at the evaluation of abilities and an orientation toward third-party opinions. This impulse interferes with how the individual behaves and interacts with peers.

The context in which abilities and opinions are compared differs according to their form, motivations, and emotional and behavioral consequences. Abilities are evaluated based on the perception of results obtained by others in a particular task or field and compared with the results achieved. It is a more objective evaluation. People with higher SCO levels and oriented toward the evaluation of abilities compare themselves with individuals they admire in order to be inspired and identify ways to achieve similar results. Therefore, they intentionally compare themselves to people they want to be like in the future.

On the other hand, there is the possibility of comparing themselves with people they believe have inferior results. This tactic is adopted to maintain a sense of superiority and self-perception of success (Gibbons & Buunk, 1999; Park & Baek, 2018). In the latter case, they can look to see if they are superior to their social media friends.

The orientation toward comparing opinions derives from subjective evaluations of behavior and positions expressed by third parties. People who compare opinions do so to map what is socially acceptable in order to understand what others think about a specific behavior. Individuals with a strong orientation toward comparing opinions seek to follow – including on social media – those they consider opinion leaders, learning these people's positions. Typically, these individuals are more inclined to succumb to social pressures and socially desirable behaviors (Festinger, 1954; Gibbons & Buunk, 1999; Park & Baek, 2018).

A milestone in the development and increase in the number of studies on the topic was the proposition of the subclinical scale Iowa-Holland Comparison Orientation Measure (INCOM) elaborated by Gibbons and Buunk (1999), adopted in this study. The emergence of a means to measure SCO allowed us to identify individuals with high social comparison tendencies and propose specific interventions to minimize such behavior, as this is not a fixed characteristic in the human personality. Also, the scale helps map the behaviors affected by SCO.

Social media has gained space in social life. The use of social media influences SCO, and these platforms offer a favorable and intuitive structure for social comparison since most users manifest passive behavior when viewing profiles, photos, or posts from other users without necessarily creating any content or having any bond or coexistence (Chou & Edge, 2012; Lee, 2014).

In Brazil, Facebook is the main social media platform, with approximately 130 million users who connect and use many functions offered, from creating an account to relating with family and friends, meeting people, and managing and promoting a business. The second most used platform is WhatsApp, installed on 98% of Brazilian smartphones and with approximately 120 million accounts. The app allows instant communication between

users, status sharing, and dissemination among groups of people, making the app a social media platform. In third place is the YouTube platform, with 105 million Brazilian users. YouTube works as a content distribution channel focused on videos and is an entertainment platform. Instagram holds the fourth position with 95 million accounts and a focus on smartphone access. The platform allows videos, photos, and stories to be shared with followers or even publicly in a dynamic and massive way (We Are Social & Hootsuite, 2020a).

These platforms' wide range of features and the high number of users suggest that they can somehow influence individuals' social comparison. In this sense, a specific line of research has addressed the individual differences and behaviors related to the comparison process. These studies investigate the consequences of SCO and how this behavior is connected to the forms and characteristics of social media use.

Studies have identified that social media users can adopt different behavioral patterns, such as visiting other people's profiles without engaging in social interaction, viewing photos and posts, and performing social comparisons (Pempek, Yermolayeva, & Calvert, 2009). These possibilities can encourage individuals with high levels of SCO to use social media more intensively, as they provide a channel where social comparisons can be carried out regularly without attracting other users' attention (Lee, 2014).

Other researchers pointed out a relationship between social comparison and lower self-esteem and psychological well-being (Alfasi, 2019; Cramer et al., 2016; Lee, 2020), minimization of perceived social support (Lee, 2020), reduced emotions such as optimism and inspiration, and increased levels of depression, envy, worry, and sympathy (Alfasi, 2019; Cramer et al., 2016; Vogel et al., 2015).

In addition, the literature shows different perspectives regarding the inherent aspects of SCO and social media use. When studying social media, Yang (2016) identified that students who often use Instagram to browse or interact feel less lonely. However, those who use Instagram to post content unrelated to others and publish without tagging others feel lonelier. In terms of social comparison, SCO was positively associated with interaction and browsing behaviors on Instagram. Thus, interacting with others and browsing their profiles are behaviors positively associated with SCO. Students with higher levels of SCO should minimize the social comparison process and preserve their levels of well-being.

As for the motivation for social comparison on social media, Cramer et al. (2016) showed that social comparison activity is positively associated with self-improvement, self-enhancement, self-destruction, and self-evaluation. The social comparison was also positively correlated with publishing and reading posts on Facebook or simply using the platform, negatively affecting self-esteem. These findings reinforce the importance of identifying, in advance, the individuals prone to social comparison to advise them about the incongruous perception of their own abilities.

The literature shows that ability-based and opinion-based SCO on social media may differ in relational terms. For example, Park and Baek (2018) found that ability-based SCO is negatively related to emotions such as optimism/inspiration and positively to depression/envy and concern/sympathy.

In turn, opinion-based SCO positively affects emotions such as optimism/inspiration and negatively affects emotions envy/depression. Yang et al. (2021) also identified this disparity of both orientations when analyzing the relationship between SCO and mental health mediated by the psychological capital (hope, self-efficacy, resilience, and optimism) of undergraduate students.

The findings by Yang et al. (2021) suggest that ability-based SCO is negatively related to self-efficacy, resilience, and optimism, while opinion-based SCO positively affects hope, self-efficacy, resilience, and optimism. The consequences of this background on psychological capital produced negative effects of resilience and optimism on students' mental health. The studies by Yang et al. (2021) and Park and Baek (2018) offer evidence that SCO settings can act contrary to people's emotions and behaviors and change the behavioral pattern of social media use.

However, the consumption of content on social networks should not be vilified in its entirety. Condie and Moon (2024), for example, showed that posts about companies on Twitter and Stocktwits can be useful for auditors to assess the continuity of companies, acting as another source of predictive information.

In most cases, social comparison is directly and positively related to patterns of use – time spent on social media and years of experience using these platforms, for example – and to elements inherent to the context of use – such as the number of friends. Also, studies have highlighted an association of SCO with different behavioral and psychological variables linked to social media use (Chou & Edge, 2012; Lee, 2014; Vogel et al., 2015).

The consequences of this type of comparison can even affect the professional sphere. Finally, Kuselias et al. (2021) demonstrated that auditors from international accounting firms, after being exposed to photos of accounting professionals having fun on social media, showed worse performance in collecting relevant evidence for auditing, in addition to higher levels of stress and dysfunctional emotions. These results suggest that social comparison

can negatively impact the performance of professionals in the area.

Specifically, in the academic context, Chou and Edge (2012) found that students at an American university who spent more hours on Facebook and who had more Facebook friends not personally known tended to believe that others were happier and that life was less fair. The number of years of using Facebook was also positively associated with the belief that other people were happier. On the other hand, those who spent more hours going out with friends each week disagreed that others were happier. The authors' discussions raise concerns about the dissonant view of the individual's life compared to other people's lives, which can negatively affect self-esteem (Chou & Edge, 2012). The core of the discussions is that social media facilitates dissonant comparative behavior by viewing the lives of others from a perspective that does not match reality.

These types of feelings often occur when people compare themselves with strangers since social media content tends to be positive and individuals do not meet personally, i.e., the positive content is the benchmark in comparison with the others. Thus, people are led to believe that a given situational moment represents the entire reality experienced by the user who posted the content on social media (Alfasi, 2019; Chou & Edge, 2012; Vogel et al., 2015).

Lee (2014) observed a positive and significant correlation between social comparison and the intense use of Facebook and did not find an association between social comparison and the number of Facebook friends. The author identified that social comparison was linked to the idea that others have better lives and results. Also, there is a recurrent tendency where people with high levels of SCO expect significant interaction when posting on social media, and interaction in the posts will raise the social comparison levels.

The study by Vogel et al. (2015) identified that university students with higher levels of SCO intensively used Facebook and were more likely to display negative feelings and emotions, such as low self-esteem and a sense of an unbalanced life. The authors discussed the possibility that individuals with high SCO use Facebook more frequently to perform upward social comparisons seeking motivation and inspiration.

In this sense, the first hypothesis of this study seeks to test whether the characteristics of social media use, such as the number of hours of daily access to social media, years of use of social media (Chou & Edge, 2012; Hawes, Zimmer-Gembeck, & Campbell, 2020), intensity of following posts/posts by celebrities and influencers, number of friends/followers on the social media that is used the most, percentage of followers that are not personally known and the percentage of followers that are considered as true friends (Chou & Edge, 2012; Lee, 2014) affect OCS through the following research hypothesis:

H1: Orientation for Social Comparison differs based on the characteristics of social media use by Accounting Science students.

This hypothesis can be subdivided as follows:

H1a: Social Comparison Orientation is higher among Accounting students who dedicate a greater number of daily hours accessing social media.

H1b: Social Comparison Orientation is higher among Accounting students who intensely follow posts from celebrities and influencers on social media.

H1c: Social Comparison Orientation is higher among Accounting students who have a larger number of friends/followers on the social network they use the most.

H1d: Social Comparison Orientation is higher among Accounting students who have a percentage of followers they do not know personally.

H1e: Social Comparison Orientation is lower among Accounting students who have a higher percentage of followers they consider true friends.

H1f: Social Comparison Orientation is higher among Accounting students who have been using social media for more years.

Other characteristics may be able to condition the orientation towards social comparison. Lins et al. (2016) found that females presented higher averages for the comparison of opinions and males for the comparison of abilities. One of the possible reasons may be the fact that males seek to socially demonstrate greater independence in relation to third parties, while females tend to be more concerned with the opinions of third parties. Other authors such as Schneider and Schupp (2011), Garanyan and Pushkina (2016) and Buunk et al. (2020) also found similar results for the gender variable.

Regarding age, Schneider and Schupp (2011) and Buunk et al. (2020) reported that younger individuals tend to compare themselves more than older individuals. Pereira et al. (2023) observed that younger individuals tend to present higher levels of aptitude for comparisons, especially in relation to abilities, while no significant differences were found in the comparison of opinions between age groups. A possible explanation for these results may be related to the insecurities that younger individuals face regarding their abilities and opinions,

which tend to decrease with maturity over the years.
Thus, the second hypothesis of this research states that:

H2a: Social Comparison Orientation is higher among female Accounting students.

H2b: Social Comparison Orientation is higher among younger Accounting students.

These discussions reinforce the importance of identifying the interaction of social and dispositional factors regarding social media use, considering that social media can harm the individual's well-being since it is an easily accessible, ubiquitous channel that stimulates social comparison. Discussions highlight the specificities that can be found in the younger population since these individuals are in the process of shaping their self-image and may be more susceptible to the adverse effects of social media (Alfasi, 2019; Chayer & Bouffard, 2010). Empirical evidence indicates a possible differentiation of SCO from the characteristics of social media use.

3 Methodology

3.1 Participants

The sample comprised 502 participants. Of this total, 325 (64.74%) identified themselves as female, 177 (35.26%) as male and none identified with other available categories. Ages ranged from 17 to 62 years (mean = 24.84 years; median = 22; standard deviation = 7.46). Participants were undergraduate accounting students enrolled in Brazilian higher education institutions (HEI) in 2021. The distribution by year consisted of 187 (37.25%) first-year students, 101 (20.12%) second-year students, 90 (17.93%) third-year, 84 (16.73%) fourth-year, and 40 (7.97%) fifth-year students. Participants were affiliated with HEIs from the five regions of the country: 237 (47.21%) from the South, 94 (18.73%) from the Northeast, 73 (14.54%) from the Central-West, 59 (11.75%) from the Southeast, and 39 (7.77%) from the North. A total of 378 (75.30%) participants attended public HEIs, 123 (24.50%) attended private HEIs, and one (0.20%) participant attended a community-based HEI.

3.2 Instruments

Iowa-Netherlands Comparison Orientation Measure (INCOM) developed by Gibbons and Buunk (1999) was used in this research, culturally adapted to the Brazilian context using the protocol by Borsa et al. (2012). This process included steps such as translating the instrument, originally constructed in English, into the participants' language (Portuguese). The translated versions were synthesized into an instrument evaluated by experts and the target population. It underwent reverse translation, was submitted to an analysis by the original author and to a pilot study and evaluation of the factor structure (psychometric validation). Five specialized translators participated in this process, two of whom were native English speakers with command of Portuguese. Also, the process of preparing the instrument counted on nine researchers trained in psychology linked to academic graduate programs in different regions of the country with experience in the construction and psychometric validation of psychometric research instruments, 15 members of the target population and the original author of the scale in English, Professor Frederick Gibbons. The Content Validity Coefficient (CVC) was used in the pilot study to assess the participants' agreement regarding the clarity, adequacy, and understanding of the statements. Hernandez-Nieto (2002) mentions that items with a CVC below 0.80 should be excluded or reformulated as their adequacy, understanding, and clarity are not uniform among the participants. As all CVCs were greater than 0.80, it was not necessary to exclude items. The collection of evidence from the pilot study was complete with the saturation criterion of Glaser and Anselm (2009). Figure 1 shows the process of cultural adaptation and validation.

INCOM was applied using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The measure presented 11 statements representing the dimensions of orientation to compare abilities and opinions, with items 5 and 11 reversed. An example of a statement is, "If I want to learn more about something, I try to find out what others think about it." The instrument was divided into two dimensions: ability-based comparison (statements from 1 to 6) and opinion-based comparison (statements from 7 to 11). The confirmatory factor analysis (CFA) identified factor loads ranging from 0.462 to 0.884 and satisfactory goodness-of-fit indices for the model ($c2$ (gl) = 136.977 (43) - p-value < 0.001; $c2/gl$ = 3.18; CFI = 0.950; TLI = 0.936; NFI = 0.930; IFI = 0.951; GFI = 0.981; SRMR = 0.068; RMSEA (90% IC) = 0.066 [0.054 – 0.079]; Factor covariance = 0.54 - p-value < 0.001) (Hair Jr et al., 2009; Kline, 2005; Marôco, 2014). The Robust Diagonally Weighted Least Squares (RDWLS) method was used to adapt the CFA to categorical data derived from measurement using the Likert scale.

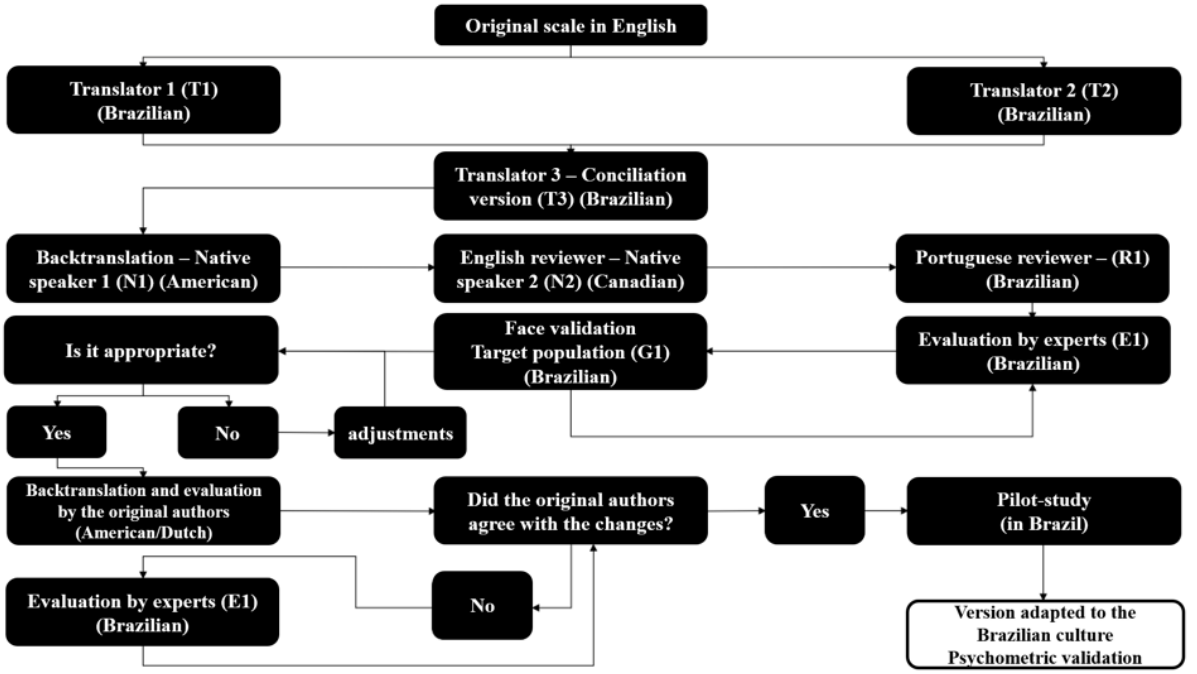

Figure 1. Stages of cultural adaptation of INCOM
Source: Elaborated based on Borsa et al. (2012)

The characteristics of social media use were assessed based on the number of daily hours logged on social media, years of social media use (Chou & Edge, 2012; Hawes, Zimmer-Gembeck, & Campbell, 2020), intensity following posts by celebrities and digital influencers, number of friends/followers on the participant's most used social media platform, percentage of friends/followers personally known, and the percentage of followers they consider real friends (Chou & Edge, 2012; Lee, 2014).

The participants were asked to offer demographic information: gender, age, region, type of higher education institution (public, private, community-based), and their most used social media platform.

3.3 Data collection procedure

The data collection process started by identifying 1,639 in-class undergraduate programs in accounting registered in the Brazilian Ministry of Education. The contact information was collected from the higher education institutions' (HEI) websites, and 865 valid e-mails were obtained. An invitation to participate and the research instrument were sent to the valid e-mails using the platform Survey Monkey®, instructing the offices to forward the material to the undergraduate accounting students. The data collection was conducted in October and November 2021.

3.4 Data analysis techniques

Data analysis included descriptive statistical techniques, such as mean, frequency, standard deviation, median, minimum and maximum, and multivariate statistics.

The confirmatory factor analysis (CFA) technique was used to verify the psychometric properties of the constructs to support the calculation of the SCO factor scores. Due to the existing covariance between the SCO factors ($r = 0.54$; p-value < 0.001), the analyses of the differences in ability-based and opinion-based comparisons regarding the characteristics of social media use, age, and gender were conducted for those clusters that showed adequate invariance indicators in the multigroup confirmatory factor analysis (CFAMG), which are: standardized root mean residual (SRMR) < 0.10; root mean square error of approximation (RMSEA) < 0.10; comparative fit index (CFI) > 0.90; Tucker-Lewis coefficient (TLI) > 0.90 (Kline, 2005; Chen, 2007; Hair

Jr et al., 2009; Marôco, 2014).

The CFAMG makes it possible to verify whether the parameters and measurement settings of the scale items are equivalent for the different groups that make up the sample. If there is confirmation of the invariance, it is possible to apply tests of differences between the clusters since sample characteristics will not bias the answers. The CFAMG is verified from three restrictive models – configural, metric, and scalar – with a negative variation of 0.01 being tolerated in the CFI verification (Damásio, 2013).

The MANOVA test was performed with the variables of clustering that met the adjustment indicators of the CFAMG to detect possible differences caused by independent variables based on the interaction of the dimensions of the dependent variables (Field, 2009). Since the research data was not normally distributed (Kolmogorov-Smirnov - p-value < 0.001; Shapiro-Wilk - p-value < 0.001), we used the simple bootstrapping method with 1,000 interactions in MANOVA to approximate the sample to the normal distribution, with a 95% corrected and bias-accelerated confidence interval (BCa). Analyses were performed using IBM SPSS Statistics version 21 and JASP version 0.16.0.

3.5 Ethical issues

Following the recommendations of the Brazilian National Health Council, participants were introduced to the Free and Informed Consent Term (FICT), which clarifies the rules regarding anonymity and privacy. This study is part of a doctoral research project registered and approved by the Research Ethics Committee CEP/SD of the university the researchers are affiliated with (Number CCAE: 42700921 in Plataforma Brasil).

4 Results

Initially, a descriptive analysis of the variables was performed, represented by the dimensions of ability-based and opinion-based comparisons and the characteristics of social media use (Table 1).

In descriptive terms, the average score of the respondents for ability-based comparisons was 18.75 (maximum 30), and for opinion-based comparisons, the average was 17.47 (maximum 25). Students dedicated an average of 5.37 hours a day to access social media and, on a scale of 0 to 10, had an average intensity of following posts by celebrities and influencers of 3.90. The numbers observed in the sample were higher than those presented in the publication by We Are Social and Hootsuite (2020b), which indicates that Brazilians spend, on average, 3 hours and 31 minutes daily accessing social media. The findings are also superior to those of Chou and Edge (2012), who analyzed only Facebook and found an average of 4.83 hours per week, equivalent to 0.69 hours per day, of access to that social media platform. The findings by Park and Baek (2018) also indicated frequent use of social media, especially Facebook, in which users log in at least five times a week. There is an advance in this research in relation to previous studies, as it encompasses different social media platforms

Table 1
Descriptive statistics– SCO and caracteristics of social media use

Variables	Mean	Standard-deviation	Median	Minimum	Maximum
1. Abilities	18,75	5,33	19	6	30
2. Opinions	17,47	3,91	18	6	25
3. Hours of daily use	5,37	3,59	5	0	24
4. Post of celebrities	3,9	2,96	3	0	10
5. Friends/ followers	517,51	759,7	270	0	7.394
6. Personal contact	61,17	28,78	66,5	0	100
7. Real friends	16,87	19,62	10	0	100
8. Years of use	10,28	3,85	10	0	24
Mean	18.75	17.47	5.37	3.90	517.51
Standard-deviation	5.33	3.91	3.59	2.96	759.7
Median	19	18	5	3	270
Minimum	6	6	0	0	0
Maximum	30	25	24	10	7.394

n = 502

Note. The significant correlations between SCO and the characteristics of social media use are shown in bold.
Key: * p < 0,05; ** p < 0,01; *** p < 0,001. Source: Elaborated by the authors

The average number of friends/followers among participants was 517 (considering the social media platform they use the most) – in the study by Chou and Edge (2012), who observed a sample of Facebook users, this number was 318, and in Park and Baek (2018) the average was 148.43. Regarding knowing online friends/followers personally, the accounting students of the sample declared to know about 61.17% of their contacts, compared to 53.47% of Chou and Edge (2012). They considered 16.87% of their friends/followers "real friends." Also, the sample is characterized by using at least one social media platform for 10.28 years.

WhatsApp was pointed out by 257 participants (51.20%) as the most used social media platform, followed by Instagram (179 or 35.66%), Twitter (22 or 4.38%), Facebook (15 participants or 2.99%), Tik Tok (9 or 1.79%), Telegram (6 or 1.19%), and LinkedIn (5 or 1%). Other platforms indicated as the most used by 9 participants (1.79%) were YouTube, Discord, Twitch, and WeVerse.

Subsequently, a multigroup confirmatory factor analysis (CFAMG) was carried out (Table 2) to verify the invariance of the research instrument as a prerequisite to using the MANOVA technique. The variables for clustering were defined from the median of the characteristics of social media use and age, while gender was distinguished into female and male.

Table 2
Multigroup confirmatory factor analysis – measurement invariance

Clusters tested	Configural invariance	Metric invariance	Scalar invariance	Decision
Hours of access	RMSEA (90% IC) = 0.059 (0.045; 0.072); SRMR = 0.078; TLI = 0.951; CFI = 0.956; ΔCFI = -	RMSEA (90% IC) = 0.057 (0,043;0,070); SRMR = 0,076; TLI = 0,953; CFI = 0,960; ΔCFI = +0,004	RMSEA (90% IC) = 0,054 (0,041;0,067); SRMR = 0,072; TLI = 0,958; CFI = 0,960; ΔCFI = 0,000	Accepted invariance
Celebrities' post	RMSEA (90% IC) = 0.061 (0,047;0,074); SRMR = 0,078; TLI = 0,945; CFI = 0,951; ΔCFI = -	RMSEA (90% IC) = 0,059 (0,045;0,072); SRMR = 0,077; TLI = 0,948; CFI = 0,955; ΔCFI = +0,004	RMSEA (90% IC) = 0,054 (0,041;0,067); SRMR = 0,072; TLI = 0,956; CFI = 0,958; ΔCFI = +0,003	Accepted invariance
Friends/followers	RMSEA (90% IC) = 0,066 (0,053;0,078); SRMR = 0,082; TLI = 0,938; CFI = 0,945; ΔCFI = -	RMSEA (90% IC) = 0,066 (0,053;0,079); SRMR = 0,081; TLI = 0,937; CFI = 0,945; ΔCFI = 0,000	RMSEA (90% IC) = 0,064 (0,051;0,076); SRMR = 0,077; TLI = 0,942; CFI = 0,945; ΔCFI = 0,000	Accepted invariance
Personal contact	RMSEA (90% IC) = 0,060 (0,046;0,073); SRMR = 0,078; TLI = 0,949; CFI = 0,955; ΔCFI = -	RMSEA (90% IC) = 0,058 (0,045;0,072); SRMR = 0,077; TLI = 0,951; CFI = 0,958; ΔCFI = +0,003	RMSEA (90% IC) = 0,053 (0,039;0,066); SRMR = 0,071; TLI = 0,960; CFI = 0,962; ΔCFI = +0,004	Invariância acatada
Real friends	RMSEA (90% IC) = 0,066 (0,054;0,079); SRMR = 0,082; TLI = 0,937; CFI = 0,945; ΔCFI = -	RMSEA (90% IC) = 0,065 (0,052;0,078); SRMR = 0,080; TLI = 0,940; CFI = 0,948; ΔCFI = +0,003	RMSEA (90% IC) = 0,061(0,048;0,074); SRMR = 0,076; TLI = 0,947; CFI = 0,950; ΔCFI = +0,002	Accepted invariance
Years of use	RMSEA (90% IC) = 0,065 (0,052;0,078); SRMR = 0,081; TLI = 0,939; CFI = 0,947; ΔCFI = -	RMSEA (90% IC) = 0,062 (0,048;0,075); SRMR = 0,078; TLI = 0,946; CFI = 0,953; ΔCFI = +0,006	RMSEA (90% IC) = 0,058 (0,045;0,071); SRMR = 0,074; TLI = 0,951 ; CFI = 0,954; ΔCFI = +0,001	Accepted invariance
Age	RMSEA (90% IC) = 0,069 (0,057;0,082); SRMR = 0,084; TLI = 0,931; CFI = 0,939; ΔCFI = -	RMSEA (90% IC) = 0,060 (0,046;0,073); SRMR = 0,077; TLI = 0,949; CFI = 0,956; ΔCFI = +0,017	RMSEA (90% IC) = 0,055 (0,042;0,068); SRMR = 0,072; TLI = 0,956; CFI = 0,959; ΔCFI = +0,003	Accepted invariance
Gender	RMSEA (90% IC) = 0,064 (0,051;0,076); SRMR = 0,081; TLI = 0,941; CFI = 0,948; ΔCFI = -	RMSEA (90% IC) = 0,062 (0,049;0,075); SRMR = 0,079; TLI = 0,944; CFI = 0,951; ΔCFI = +0,003	RMSEA (90% IC) = 0,059 (0,045;0,071); SRMR = 0,075; TLI = 0,950; CFI = 0,953; ΔCFI = +0,002	Accepted invariance

Source: Elaborated by the authors

The models' CFI delta showed no worsening in the comparison between the models. The satisfactory indicators in the CFACMG suggest that the scores obtained in the research instrument were related to the level of the latent trait of the participants, regardless of their group – an indication of the absence of response bias caused by a characteristic of the group below the measured trait (Sass, 2011).

Once the invariance of the research instrument was confirmed, the MANOVA analysis was performed, as shown in Table 3.

Table 3
Comparison between means of SCO factors and characteristics related to social media use and the participants' gender and age

Clusters	p-value	Effect	Factors	Groups	Mean	p-value
			MANOVA 1			
H1a: Hours of daily access	0,838	0,001	Abilities	I < 5.00	18,306	0,894
				II >= 5.00	18,389	
			Opinions	I < 5.00	17,187	0,643
				II >= 5.00	17,394	
H1b: Following posts of celebrities and influencers	0,003	0,026	Abilities	I < 3.00	17,298	**0,001**
				II >= 3.00	19,363	
			Opinions	I < 3.00	16,723	**0,013**
				II >= 3.00	17,838	
H1c: Number of friends and followers	0,024	0,017	Abilities	I < 270.00	18,148	0,512
				II >= 270.00	18,552	
			Opinions	I < 270.00	16,716	**0,009**
				II >= 270.00	17,881	
H1d: % Friends and followers that participants know personally	0,179	0,008	Abilities	I < 66.50%	18,180	0,582
				II >= 66.50%	18,519	
			Opinions	I < 66.50%	16,891	0,070
				II >= 66.50%	17,699	
H1e: % Real friends	0,999	0,000	Abilities	I < 10.00%	18,408	0,846
				II >= 10.00%	18,288	
			Opinions	I < 10.00%	17,257	0,888
				II >= 10.00%	17,320	
H1f: Years of use	0,665	0,002	Abilities	I < 10.00	18,608	0,407
				II >= 10.00	18,094	
			Opinions	I < 10.00	17,461	0,451
				II >= 10.00	17,123	
			MANOVA 2			
H2a: Gender	0,397	0,004	Abilities	I – Female	18,986	0,289
				II – Male	18,450	
			Opinions	I – Female	17,465	0,748
				II – Male	17,585	
H2b: Age	0,211	0,006	Abilities	I < 22 years old	19,149	0,088
				II >= 22 years old	18,287	
			Opinions	I < 22 years old	17,739	0,252
				II >= 22 years old	17,311	

Source: Elaborated by the authors

The conduct of MANOVA allowed for the evaluation of the hypotheses regarding differences in the means of the Social Comparison Orientation (SCO) factors in relation to the groupings of social media usage characteristics (Model 1) and gender and age (Model 2). The results from the MANOVA indicate that the number of daily hours spent on social media (H1a), the percentage of followers on social media that one does not know personally (H1d), the percentage of followers considered true friends (H1e), and years of usage (H1f) do not differentiate the Social Comparison Orientation.

Although authors like Chou and Edge (2012), Vogel et al. (2015), and Yang (2016) suggest that time and proximity to followers can maximize SCO, the findings do not support this relationship. The rejection of hypotheses H1a,

H1d, H1e, and H1f suggests that the dynamics involving SCO may be more complex, not solely based on the time spent on social media or the proximity to followers, but involving other, more qualitative factors such as the type of content consumed or the kind of people with whom one interacts.

On the other hand, the group that follows posts from influencers and celebrities more frequently showed higher scores in both dimensions of SCO, leading to the acceptance of hypothesis H1b. Park and Baek (2018) and Yang et al. (2021) warn about the effects of SCO on individuals' psychological well-being. In this context, following influencers and celebrities can expose individuals to an idealized life projection, intensifying social comparisons, personal expectations, and reinforcing the desire for social validation.

Moreover, the number of followers/friends showed a significant difference for the opinion-oriented comparison dimension, with the group having a larger number of followers/friends scoring higher. Thus, H1c could not be fully rejected. These findings diverge from Lee (2014), who did not identify an association between social comparison and the number of friends on Facebook.

Therefore, accounting students, being in a phase of academic and professional training, tend to engage in social comparisons to establish benchmarks for skills and opinions based on the behavior of celebrities, which can be intensified (Pempek, Yermolayeva, & Calvert, 2009; Lee, 2014), potentially leading to negative emotional effects such as low self-esteem and psychological well-being (Alfasi, 2019; Vogel et al., 2015). This effect is particularly relevant for university students who are forming their personal and professional identities.

From the perspective of professional performance, Kuselias et al. (2021) emphasize that in fields where technical skills and social interactions are essential for success, such as accounting, understanding the effects of social comparison on social media is crucial for evaluating its consequences on everyday professional performance.

Finally, no variations in SCO were found based on gender and age, leading to the rejection of hypotheses H2a and H2b. These results differ from the studies of Schneider and Schupp (2011), Garanyan and Pushkina (2016), Lins et al. (2016), Buunk et al. (2020), and Pereira et al. (2020). As social media are ubiquitous in people's lives and access is homogeneous across different population strata, it is likely that over time, sociodemographic variables tend to play a less significant role in this differentiation.

5.Implications, Limitations, and Future Studies

5.1 Theoretical implications

Some of the results are inconsistent with previous literature. Disagreeing with Lee (2014) and Vogel et al. (2015), the frequency of social media use was not related to SCO. The number of friends/followers showed a significant difference for the opinion-based comparison dimension, which contrasts with the findings of Lee (2014). This result indicates that maximizing the number of friends/followers expands the range of possibilities and opportunities to carry out an opinion-based social comparison.

Furthermore, the tracking of posts by influencers and celebrities differentiating the facets of SCO may stem from the profile of the accounting professional reported in the literature, which is introverted and may seek socially acceptable behavior patterns on social media

5.2 Practical implications

From a practical perspective, the research findings constitute a direction and a concern for conscious social media use. The study reinforces that social media content is a partial reality and, typically, a cut of only positive aspects. Young social media users, particularly accounting students, must be aware of this characteristic in order to protect their mental health when looking up to friends/followers and people followed on social media as models influencing their self-enhancement processes.

Awareness campaigns, self-setting limits on hours of social media use, restricting access to private information, and responsible monitoring of content produced by influencers and celebrities are essential to contain the adverse effects of these platforms.

5.3 Social implications

This study contributes socially by raising discussions about the conscious use of social media, in terms of usage characteristics, in light of social comparison. The findings – even though emerging from a specific population (accounting students) – inspire debates in other spheres, discussing the effects of social media platforms on the younger population and the future of society.

5.4 Limitations and future studies

The low adherence of participants was a limitation of this study and occurred because of the COVID-19 pandemic that forced some HEIs to suspend teaching activities, demobilizing students. The findings are restricted to the analyzed sample, and the data were collected through self-reports. Therefore, future studies

should adopt complementary analytical techniques. The findings facilitate advancements in research; therefore, it is recommended to investigate the primary behaviors exhibited on the most frequently used social media platforms by students, as well as the emotions elicited from this usage.

6.Conclusion

Social media platforms are ubiquitous in individuals' lives, especially the younger population. Some usage characteristics of these platforms differentiated the dimensions of Social Comparison Orientation, indicating that these platforms go beyond their role as leisure and information-seeking tools and are capable of distinguishing the psychological characteristics of individuals. This research represents an innovation in the Brazilian context by promoting these discussions considering accounting students and raising awareness among educational institutions about the importance of monitoring the education process.

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