

Original Research Article

Relationship between Online Social Comparison and Self-Concept among Undergraduate University Students in Abia State, Nigeria

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Abstract: Online social comparison and self-concept have emerged as significant areas of research in the field of psychology, particularly in relation to the experiences of university students. This study assessed the relationship between the domains of online social comparison and self-concept of undergraduate university students in selected universities in Abia State, Nigeria. Based on the social comparison theory of Leon Festinger and self-concept theory of Carl Rogers, the study used an embedded mixed method design, with a target population of 15, 915 undergraduate university students. Simple random and snowball sampling procedures were used to select 274 participants for the quantitative strand, and 12 respondents for the qualitative strand respectively. The adapted Iowa-Netherlands Comparison Orientation Measure (INCOM) and the Robson Self-concept Scale (SCS) were used as quantitative instruments, while a semi-structured interview guide was used to collect qualitative data. Quantitative data was analyzed using descriptive and inferential statistics with the aid of the Statistical Package for Social Sciences (SPSS) version 25, while qualitative data was analyzed using thematic content analysis. The study showed a positive weak correlation between appearance social comparison and self-concept ($r=0.233$, $p < 0.01$); a positive weak correlation between opinion social comparison and self-concept ($r= 0.132$, $p < 0.05$) and a positive weak correlation between ability social comparison and self-concept ($r=0.236$, $p < 0.01$). Upward social comparison and self-concept were found to be negatively correlated ($r=-0.131$, $p < 0.05$) whereas, no significant correlation was found between downward social comparison and self-concept. The study therefore concludes that other factors may mediate the relationship between online social comparison and self-concept among university students.

Keywords: Domains, Online, Social, Comparison, Self-Concept, Students.

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I. BACKGROUND TO THE STUDY

In today's digital age, where social media platforms are widely accessible and extensively used, the phenomenon of online social comparison and its connection to self-concept has gained prominence (Verduyn *et al.*, 2020). Online social comparison refers to the tendency to value one's own personal and social worth by assessing how they compare with others online (Cherry, 2022). This process has implications for an individual's self-concept, which encompasses the beliefs, perceptions, and evaluations a person holds about oneself. For example, an individual may share a text or image via online platforms, get minimal likes or comments, subsequently appraise himself or herself unfavorably as unworthy of external validation and, as a

direct consequence, withdraw from social engagements due to feelings of insecurity.

Considering that self-concept influences the way an individual shows up on social media platforms, it is important to highlight the opportunity offered to users to present themselves in an authentic way and to handle the impression they want to cause. The handling of this impression online allows the individual to adjust his/her image to his/her goals and needs for social interaction. However, there is a tendency to engage in favorable self-presentation that is socially desirable, which makes the users shy away from their reality to show themselves in an idealized way, emphasizing attractive traits (Vogel *et al.*, 2014). Instagram users, for example, can transmit

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their personal characteristics through image publications, sometimes intentionally modified, which can be used for comparison by other users of the online social network who access their profile.

Egunjobi and Agwu (2024) noted that with the interactions in the digital space, social media, and various online platforms, technology has the capacity to influence how individuals perceive themselves and others. This is because the online space enables individuals to create and curate digital personas and these online identities can reflect aspects of oneself, but can also lead to discrepancies between one's digital self and real-life self. Thus, online platforms offer opportunities for self-disclosure and self-presentation, which can influence individual's self-concept and how people perceive others. For example, people may emphasize certain traits or achievements to create a favorable online image.

Studies such as that of Stapleton *et al.*, (2017) aim at understanding the relationship between the use of online social comparison and self-concept. The results have shown that the greater the frequency of using Facebook, the higher the levels of social comparison, especially upward social comparison. The results of Stapleton also showed that the greater the intensity of Instagram use, the higher the levels of comparison with other users. In addition, the higher the levels of social comparison, the lower the levels of self-concept. When participating in online social networks, the individual not only exposes his/her life to the observation of others, but is also exposed to that of others, which enables him/her to carry out self-assessment based on what he/she sees virtually. Wang *et al.*, (2017), for example, found that the use of online social networks is positively associated with upward social comparison, which, in turn, is negatively related to self-esteem. Thus, upward social comparison is shown to mediate the relationship between the use of online social networks and self-esteem.

Furthermore, the relationship between the frequency of using Facebook and self-concept was significantly mediated by upward social comparison (Vogel *et al.*, 2014). Similar results were also found for Instagram (Stapleton *et al.*, 2017). Even though social comparison on Instagram is negatively associated with self-concept, it correlates positively with the level of inspiration of users, defined as a motivational state that can be experienced in different areas of life (Meier & Schäfer, 2018). From this perspective, the greater the social comparison, the lower the self-concept and the greater the level of inspiration, which suggests that the network participants observe others and feel motivated for self-improvement. Thus, social comparison can be associated with benefits or harms to the individual who practices it. Johnson (2021) also explored the inputs and outputs of social media social comparison and its impact on psychological well-being in the United States of America. The study highlighted that computer-mediated

social comparisons can be a threat to psychological well-being, as online friends selectively self-present, leading to biased upward social comparisons and feelings of inadequacy. Computer-mediated social comparisons have been identified as a threat to psychological well-being. Because online friends selectively self-present, social comparisons may be biased upward, producing feelings of inadequacy. Comparing upward thus boosted negative affect, harmed self-esteem, and produced pluralistic ignorance. Downward comparisons on the other hand enhanced self-esteem and reduced pluralistic ignorance about offline friends.

In the African context, where the use of social media platforms is also on the rise, exploring the relationship between online social comparison and self-concept among university students becomes particularly relevant. For Pelsier and Schalkwyk (2023), Africa, as a continent, has witnessed a significant increase in internet and social media penetration rates in recent years, leading to the adoption of these platforms by individuals across various age groups, including university students. This digital shift has opened up new avenues for social comparison, which can impact the self-concept of African university students. Nguyen *et al.*, (2022) while investigating the relationship between perceived social support and mental well-being in in-person and online contexts using relational regulation theory as a guiding theoretical framework. Prior research consistently finds a positive link between perceived social support and better well-being discovered that perceived social support was positively related to well-being and both self-disclosure and social safeness mediated the relationship between perceived social support and well-being for in-person relationships. For online relationships, a person may only need to feel socially safe to have better mental well-being.

Locally, the result from a study by Yara (2010), revealed that students in South Western Nigeria believed in themselves that natural ability, good luck and lots of hard work studying at home will make them do well in mathematics. Thus, investigating the relationship between online social comparison and self-concept among undergraduate university students in Abia State, Nigeria, offers a unique opportunity to explore this phenomenon from global, African, and local perspectives. It also provides valuable insights into the experiences, challenges, and psychological well-being of university students in the region, while also contributing to the broader knowledge base on online social comparison and self-concept in the African context. This research holds the potential to inform interventions, policies, and support systems tailored to the specific needs of university students in Abia State and contribute to the overall well-being of individuals in an increasingly digital world.

II. OBJECTIVE

This study sought to examine the relationship between the domains of online social comparison and self-concept among undergraduate students in selected universities in Abia State, Nigeria.

III. METHODOLOGY

This study adopted the embedded design within the mixed method approach. Creswell (2017) argued that mixed method research offers more detailed evidence to study research issues than either qualitative or quantitative research alone. The researcher utilized a mixed-methods approach because, as stated by Mvumbi and Ngumbi (2015), it outperforms the use of either qualitative or quantitative methods alone. This strategy was employed to achieve the research objective and to provide more thorough evidence in qualitative as well as quantitative investigations, as it promotes the use of many worldviews, including inductive and deductive reasoning.

The target population of 15, 915 undergraduate students, out of which 274 participants were selected using the Yamane (1973) sample size determination formula with the confidence level at 95%, and the margin error at 5%. In order to get a population that represents the study, the researcher selected four universities; two public universities and two private universities through stratified sampling. The universities were selected to ensure an equal representative sample and allow for a comparative analysis of the differences and similarities between public and private educational institutions.

All ethical considerations were followed. Before the data collection, ethical approvals were obtained from the Department of Psychology at the

Catholic University of Eastern Africa, the ministry of Education in Abia State and the institutions involved in the study. Consent was also obtained from the participants involved in the study.

IV. FINDINGS

Sample Characteristics

While 45.6% of the participants were male, 54.4% were female, which shows that the genders were complimentary. Majority of the participants (87.23%) were within the age range of 21 years and above, while the age range of 18 to 20 had the least participants (12.77%), which may indicate that most students within this age range were still joining the university and grappling with the demands of a higher educational environment.

The study also used interviews to explore the phenomenon of online social comparisons and self-concept among undergraduate university students in Abia State, Nigeria. The sample of university students obtained comprised of 12 respondents with more female (8 students) than male (4 students). Their age ranged from 20 to 32 years. The level of studies of the participants spanned through the four years of undergraduate programs in universities. They also consisted of both public and private university students. The code UNS given to the respondents represents the acronym for "University Student".

Relationship between online social comparison and self-concept

Table 1 shows the relationship between the domains of online social comparison and self-concept among undergraduate university students.

Table 1: Relationship between Online Social Comparison and Self-Concept

		Appearance Social Comparison	Ability Social Comparison	Opinion Social Comparison	Upward Social Comparison	Downward Social Comparison	Self-Concept
Appearance Social Comparison	Pearson Correlation	1					
	Sig.(2-tailed)	-					
Ability Social Comparison	Pearson Correlation	.456**	1				
	Sig.(2-tailed)	.000	-				
Opinion Social Comparison	Pearson Correlation	.356**	.443**	1			
	Sig. (2-tailed)	.000	.000	-			
Upward Social Comparison	Pearson Correlation	.117	-.105	-.260**	1		
	Sig. (2-tailed)	.052	.082	.000	-		
Downward Social Comparison	Pearson Correlation	.165**	.026	.083	-.306**	1	

		Appearance Social Comparison	Ability Social Comparison	Opinion Social Comparison	Upward Social Comparison	Downward Social Comparison	Self-Concept
	Sig. (2-tailed)	.006	.667	.169	.000	-	
Self-Concept	Pearson Correlation	.233**	.236**	.132	-.131*	.054	1
	Sig. (2-tailed)	.000	.000	.030	.031	.377	-
	N	274	274	274	274	274	274

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

To further probe into the explanations of the relationship between the online social comparison and self-concept among undergraduate university students, the researcher conducted interviews to highlight this trend, the results of the qualitative interviews were thematically analyzed and presented. Themes such as balanced self-perception, self-regulation and competition were prominent in the responses from the interviews.

Balanced Self-Perception: University students recognized the difference between their behavior and others online, such as asserting their self-concept. They described a balanced approach, implying a middle ground between being overly involved and detached. The key theme here is a sense of moderation in how they use social media compared to what they perceive as the extremes of others. From the interviews, some students echoed;

It can be both. I've seen pictures or videos that made me want to improve myself, but I've also felt discouraged when I couldn't live up to the standards I saw online. It's about balance, but it's hard to find that balance sometimes. (Respondent UNS3, Interview, 10/07/2024).

Self-Regulation: Despite acknowledging the harmful nature of comparison, the students admit being affected by it, showing an internal conflict between what they know is harmful and their emotional response. However, there is an element of intentionality, as students actively try to use social media for productive purposes, positioning themselves against those who engage in less constructive online behavior. Some respondents thus asserted;

It's unhealthy when you let it take over. I've definitely felt less confident because I was comparing myself to influencers or even friends online. But I also think it's healthy if it helps push you to grow in a positive way without feeling bad about yourself (Respondent UNS3, Interview, 10/07/2024).

Unhealthy Competition: Students often find that the social media can exacerbate unhealthy competition and comparison among them which lead to negative emotions, especially the feelings of insecurity.

A respondent asserted thus; *"It's a mixed feeling. On one hand, seeing what others have achieved motivates me to do better, but on the other hand, sometimes it just makes me feel insecure, like I'm not good enough."* (Respondent UNS4, Interview, 10/07/2024).

V. DISCUSSION OF THE FINDINGS

The results of this study align with the research done by Midgley *et al.*, (2021) which highlighted the effects of appearance-based online social comparison on self-esteem and body image among university students. Individuals with lower self-esteem often make more frequent and extreme upward comparisons while browsing social media, leading to further declines in self-evaluations. The enhanced emphasis on ideal physical appearances on social media can trigger body dysmorphic tendencies, particularly in those predisposed to such disorders (Khanna & Sharma, 2017). For undergraduate university students, appearance is a crucial aspect of self-worth, and they often rely on peer approval to meet their psychological needs for self-validation.

Opinion Social Comparison is positively correlated with Appearance Social Comparison (0.356, $p < 0.01$), Ability Social Comparison (0.443, $p < 0.01$), and Self-Concept (0.132, $p < 0.05$). People who compare their opinions tend to also compare appearance and abilities, with a small link to self-concept. However, Opinion Social Comparison is negatively correlated with Upward Social Comparison (-0.260, $p < 0.01$), suggesting those who frequently compare opinions are less likely to engage in upward comparisons.

The Pearson correlation coefficient between ability social comparison and self-concept was found to be 0.236, indicating a positive correlation. This suggests that individuals who often compare their abilities to others tend to have a somewhat stronger self-concept. Although the correlation is not very strong, it is still notable. The significance level (Sig. (2-tailed)) of 0.000 shows that this correlation is statistically significant at the 0.01 level, meaning the relationship is unlikely to be due to random chance. A moderate positive correlation between comparing one's abilities to others and self-concept suggests that individuals who engage in such comparisons may have a slightly more defined or positive sense of self. However, other factors

likely contribute to self-concept, as the correlation is not particularly strong.

Upward Social Comparison is negatively correlated with Opinion Social Comparison (-0.260 , $p < 0.01$), Downward Social Comparison (-0.306 , $p < 0.01$), and Self-Concept (-0.131 , $p < 0.05$). This means that those who engage in upward comparison (comparing to those perceived as superior) tend to compare opinions less often, engage less in downward comparisons, and this may slightly negatively impact their self-concept. While the results of this study is consistent with that of Vogel *et al.*, (2024) who found out that upward social comparison has an effect on the self-esteem of individuals, it also contrasts the study done by Nayenggita and Adishesa (2021) who discovered that upward and downward social comparisons were not able to be a mediator between the influences of the intensity of using Instagram on self-esteem significantly. The diverse findings may be due to cultural influences and other factors in the different studies.

Self-Concept is positively (weak) correlated with Appearance Social Comparison (0.233 , $p < 0.01$), Ability Social Comparison (0.236 , $p < 0.01$), and Opinion Social Comparison (0.132 , $p < 0.05$). This suggests that individuals' self-concept is somewhat related to how often they compare their appearance, abilities, and opinions to others. There is a weak negative correlation with Upward Social Comparison (-0.131 , $p < 0.05$), indicating that frequent upward comparisons might have a slightly negative effect on self-concept.

Significant correlations suggest relationships between different types of social comparisons and self-concept. Appearance, ability, and opinion comparisons are somewhat linked, and they are all positively related to self-concept. Upward social comparisons show some negative associations, particularly with self-concept and other comparison types. Downward comparisons don't strongly relate to most other variables except for a negative correlation with upward comparisons.

Persons with high self-esteem are more self-confident, and proud of themselves and they have more favorable self-concepts (Peng *et al.*, 2019). These individuals demonstrate an inclination to compare with others online and in so doing, may post pictures or comments that increase their status. Thus, it seems logical to assume that persons with high self-esteem will be conspicuous in downwardly comparing themselves with others than individuals with low self-esteem. Vogel *et al.*, (2014) also identified that with the increased use of social networking sites, most social comparison is upward in nature. This situation can partly be explained by the fact that users tend to show their ideal self on most social media. As a result, students may be exposed to more content that could create upward social comparison.

Some students may engage in upward social comparison (comparing themselves to more successful individuals), which could either motivate self-improvement or lower self-esteem depending on how they interpret the comparisons. Others may engage in downward social comparison (comparing themselves to those perceived as less successful), which can boost self-esteem. While online social comparison may influence self-concept, it is not the sole determinant. According to Valls (2022), students who often engage positively in the social media would have a better self-concept and academic achievement. In the same vein, Webb-Williams (2021) found that students who show low-abilities were more vulnerable to the negative effects of social comparison on self-evaluation and performance evaluation, and avoided upward comparisons.

The interviews provided rich qualitative insights into the relationship between online social comparisons and self-concept among undergraduate university students. The qualitative interviews revealed that online social comparisons significantly shape university students' self-concept, presenting both opportunities for growth and risks of emotional harm. This indicates that social media amplifies the instability of self-concept during formative university years. When students compare themselves to those they perceive as more successful, attractive, or happy online, it can lead to inspiration or motivation. However, excessive upward comparisons often lead to feelings of inadequacy, jealousy, and lowered self-esteem. These responses thus highlight the need for better understanding of social media's curated nature and the emotional effects of comparisons.

VI. CONCLUSION AND RECOMMENDATIONS

This study showed that student's self-awareness of their appearance, their ability, and opinions in the online space contributed to a greater self-concept, although other factors may mediate the relationship between the variables. Also, the findings from the interviews provided insights into the relationship between the domains of online social comparison and self-concept. Drawing from the findings and analysis presented in this study, educational institutions, especially universities in Abia State, Nigeria may encourage their teachers to become positive mentors to students.

Conflict of Interest: Authors declare no conflict of interest exists.

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