Predictive Role of Social Comparison on the Severity of Cluster B and Cluster C Personality Disorder Symptoms in the Digital Age

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ABSTRACT

Social media usage has significantly reshaped interpersonal interactions, amplifying the frequency and intensity of social comparisons among users. While commonly used, the psychological implications of digital social comparison in relation to personality disorders remain underexplored. This study investigated the predictive role of digital social comparison on the severity of Cluster B and Cluster C personality disorder symptoms among university students. A cross-sectional design was employed with a sample of 174 students from various campuses, who completed the Digital Social Comparison Scale and the Personality Disorder Symptoms Scale, along with demographic questions. Pearson correlation analyses revealed significant positive relationships between digital social comparison and all personality disorder symptoms, with the strongest associations observed for histrionic, dependent, and narcissistic traits. Regression analysis confirmed digital social comparison as a significant predictor of symptoms across both clusters. Notably, histrionic (β = .534), dependent (β = .489), and narcissistic (β = .466) symptoms showed the strongest effects. These findings suggest that digital social comparison is a relevant psychological risk factor contributing to the exacerbation of Cluster B and C personality traits. The results support the need for targeted therapeutic interventions and digital literacy initiatives to reduce maladaptive comparison behaviors and strengthen psychological resilience in digitally active populations.

Keywords: Digital social comparison, Personality disorder symptoms, Cluster B, Cluster C, Narcis-sistic traits, Borderline personality, Obsessive-compulsive personality, Social media use, University students, Psychological risk factors.

INTRODUCTION

Societies worldwide have started in recent years to transition into a digital era, more specifically the extensive use of social media, which has become an unexpendable part of daily life globally. This significant shift has dramatically influenced interpersonal relationships and interactions, affecting the way individuals perceive themselves and others. More notably, the phenomenon of social lies at the core of this transformation, which refers to the innate tendency to evaluate or compare one-self relative to others. While social comparison could be

an incentive for personal growth, it more often than not carries negative connotations and psychological affects, particularly when it comes to digital platforms since it enables comparisons to become more frequent and intense (Kong et al., 2021).

The surge in various social media platforms such as Instagram, TikTok, and YouTube has introduced a new form of social comparison where regardless of age; individuals can compare their lives to the lives of online influencers who explicitly share the positive aspects if their lives (Irmer & Schmiedek, 2023). In Festinger's Social Comparison Theory (1954) (Festinger, 1954) he provided a fundamental perspective to help understand these dynamic, in recent studies where this theory has been explicitly applied, it was found that social media enhances exposure to upward and downward comparisons, consequentially increasing the vulnerability to psychological issues such as narcissistic traits (Kong et al., 2021). The compensatory Internet Use Model (Kardefelt-Winther, 2014) adds to that theory by proposing that individuals, specifically those who exhibits vulnerable narcissistic traits tend to engage excessively with social media in a way to cope with emotional stress or compensate for unfulfilled social needs, causing problematic usage patterns to perpetuate (Musetti et al., 2022).

Additionally, According to the cognitive-behavioral models, some individuals may be led towards the usage of social media as a coming mechanism due to pre-existing effective symptoms or maladaptive behaviors, which could inadvertently reinforce maladaptive cognition and exaggerated emotional responses. (Ahmed & Vaghefi, 2021). The model provides insight into how personality distress related to personality disorders could potentially drive to compulsive social media use, potentially leading to amplifying symptoms of disorders such as borderline personality disorder (BPD), and narcissistic personality disorder (NPD).

According to an article made by The DataReportal, 70.3% of the world's population uses mobile phones, with over 5.5 billion internet users as of October 2024, indicating to continuous growth within the global digital world (Kemp, 2024). All while social media concurrently continues to get significantly propagated, with over 250 million new users joining social media platforms between October 2023 and October 2024, which emphasizes the rapid development of online connectivity (Ortutay, 2024). Digital statistics from early 2024 in Jordan demonstrated a surge in social media usage, with YouTube's video content being consumed by more than half of the population, 56.2% to be exact, and Instagram reaching approximately 3.7 users, TikTok just below that at 2.67 million users above the age of 18 (Kemp, 2024). Given the magnitude of these numbers, a reasonable concern arose about the predictive power of social comparison in the development of personality disorder traits, specifically Cluster B and Cluster C.

Empirical evidence consistently emphasizes the significant associations between social media use and personality disorders within Clusters B and C. Narcissistic personality traits have been strongly linked to heavy social media usage, which could reflect as frequent posting of selfies or self-promotion in order to gain other people's admiration and validation (Yang & Crespi, 2025; Kong et al., 2021). Borderline personality disorder traits similarly correlate strongly with compulsive social media behaviors, such as frequent posting, editing, and deleting of posts, which could deteriorate and further destabilize self-esteem and identity disturbances through chronic social comparisons (Yang & Crespi, 2025; Collins & Grant, 2025).

Past literature has also linked histrionic personality symptoms with heightened social media behaviors often defined by attention-seeking and dramatic self-presentation, including extensive selfie-sharing and addictive usage behaviors behaviors (Yang & Crespi, 2025; Akça et al., 2020). Furthermore, preliminary evidence suggests antisocial personality symptoms, characterized by impulsivity and risk-taking, may also be linked to problematic social media behaviors, though further research on this specific association is required (Akça et al., 2020).

Although less extensively studied, Cluster C personality disorders, such as avoidant and dependent personality disorders, have been linked to inconvenient social media use. Individuals with avoidant symptoms, fearful of rejection, and dependent symptoms, marked by an intense need for reassurance, may engage in various online comparisons, intensifying their interpersonal anxieties and dependency behavior (Akça et al., 2020). There remains a notable gap in the literature on obsessive-compulsive personality disorder (OCPD) and its interaction with social media, similarly, warranting future research attention.

Furthermore, modern technology has extended beyond mere social communication, influencing the shaping of personal identity and interpersonal connections. Within the information age, individuals constantly encounter a variety instances where they compare their lives to others through digital content shared on platforms such as Facebook, Instagram, and Twitter. This prolonged digital exposure can further increase anxiety and negative feelings among individuals with personality disorders, as they frequently encounter idealized and naive perceptions of others' lives. For Cluster B individuals, this influence may further aggravate a core need for social validation and attention, potentially triggering narcissistic behaviors or emotional instability (Mustafa et al., 2024). In contrast, Cluster C individuals may experience intensified feelings of defect or fear of rejection, leading to an increase in effects of isolation or hesitation to engage socially (Tyrer, 2024). Understanding the influence of digital social comparison on developing personality disorder symptoms can be of assistance to the implementation of tailored

therapeutic programs aimed at managing these negative effects and further enhancing psychological well-being within this digital age.

Given the constant use of social media and its potential psychological influence, particularly in enhancing maladaptive personality symptoms through the frequent digital comparisons, this study aims to empirically examine the predictive role of social comparison in the onset and exacerbation of Cluster B and Cluster C personality disorder symptoms among university students. This study aims to empirically investigate these relationships through the utilization of quantitative assessments of social comparison tendencies and personality disorder symptoms within a cross-sectional sample of university students. Clarifying this intricate relationship can provide core understandings into the psychological risks in relations to social media use and inform targeted psychological interventions designed to mitigate these effects.

MATERIALS AND METHODS

This study employed a cross-sectional correlational design to examine the predictive relationship between digital social comparison and personality disorder symptoms among university students.

Participants

This cross-sectional study included 174 university students who were recruited through physical barcode flyers placed strategically around several university campuses between January and March 2024. Participants were included based on their active usage of social media platforms. Demographic information collected included age, gender, social media usage duration, and preferred social media platform.

Measures

Participants completed a questionnaire consisting of demographic questions, the Digital Social Comparison Scale, and the Personality Disorder Symptoms Scale. The Digital Social Comparison Scale was adapted from the Iowa-Netherlands Comparison Orientation Measure (INCOM) [14], assessing participants' tendencies toward social comparisons within digital environments. The scale consists of 11 items rated on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), including two reverse-scored items. It contains two subscales: comparison of abilities (e.g., "I often compare myself with others with respect to what I have accomplished in life") and comparison of opinions (e.g., "I often compare my opinions with those of others"). Higher scores reflect a greater tendency to engage in digital social comparison. Items evaluated both frequency and intensity of comparisons made on social media, and the scale has been previously validated demonstrating robust reliability and validity (Cronbach's alpha = .87).

The Personality Disorder Symptoms Scale, developed by Dr. Mohammed Ghanem, alongside his peers, Prof. Adel Demerdash, and Dr. Magdy Zainah (Ghanem, El-Mordash, & Zeinah, 2005), assessed symptoms consistent with Cluster B (dramatic, overly emotional behaviors) and Cluster C (anxious, fearful behaviors) personality disorders. This measure demonstrated high internal consistency with a Cronbach's alpha of .85 for Cluster B symptoms and .82 for Cluster C symptoms in this sample. This scale is based on the diagnostic dimensions of the DSM-5 and includes items measuring the frequency and severity of relevant traits. Responses are rated using a 4-point Likert scale (0 = Very False or Often False to 3 = Very True or Often True). Sample items include: "I get irritated easily" (Cluster B) and "I often feel uncomfortable when I'm not sure what others think of me" (Cluster C). Higher total or subscale scores reflect greater symptom severity in the respective personality disorder dimensions.

Data Collection Procedures

Participants received thorough explanations about the study's objectives and procedures prior to providing researchers with informed consent. Participation in the study was completely voluntary, with the participants confidentiality being strictly retained.

Statistical Analysis

The study's data analysis was conducted using IBM SPSS (Version 23). Descriptive statistics were computed to describe demographic variables and social media usage patterns. Pearson correlation coefficients evaluated relationships between social comparison and personality disorder symptoms. Multiple linear regression analyses assessed the predictive role of social comparison on personality disorder symptoms. Significance was set at $p < .05$.

Ethical Considerations

Ethical approval was obtained from the Research Ethics Committee of Al-Ahliyya Amman University. This study was conducted in accordance with the Declaration of Helsinki. Informed consent was obtained from all participants prior to data collection.

RESULTS

Descriptive Characteristics

The study sample consisted primarily of females (77.0%) and participants with an age range of 18 to 31 years (44.3%). Most participants (78.2%) reported daily social media use ranging between one to six hours. Instagram was ranked at top as the most frequently used platform (43.1%), followed by Facebook (22.4%) and WhatsApp (18.4%). Participant demographics are shown in Table 1.

Table 1. Participants' Demographics (n = 174).

Criterion	Subgroup	Number	Percent
Gender	Male	40	23.0%
	Female	134	77.0%
Age	18–24	29	16.7%
	25–31	48	27.6%
	32–38	31	17.8%
	39–45	31	17.8%
	46+	35	20.1%
Education	Diploma	17	9.8%
	Bachelor	68	39.1%
	Master	70	40.2%
	Doctorate	19	10.9%
Marital Status	Married	86	49.4%
	Single	72	41.4%
	Divorced	11	6.3%
	Widowed	5	2.9%
Social Media Use	< 1 hour per day	10	5.7%
(Time spent per day)	1–3 hours per day	69	39.7%
	4–6 hours per day	67	38.5%
	> 6 hours per day	28	16.1%
Preferred Platform	Instagram	75	43.1%
	Snapchat	13	7.5%
	Facebook	39	22.4%
	TikTok	5	2.9%
	Twitter	2	1.1%
	YouTube	8	4.6%
	WhatsApp	32	18.4%

Correlation Analysis

Pearson correlation analysis indicated statistically significant positive links between digital social comparison and all of the measured symptoms of personality disorders. Strong positive correlations were observed for histrionic symptoms ($r = .534$, $p < .001$), dependent symptoms ($r = .489$, $p < .001$), and narcissistic symptoms ($r = .466$, $p < .001$). Moderate positive correlations were identified for borderline ($r = .440$, $p < .001$), avoidant ($r = .342$, $p < .001$), obsessive-compulsive ($r = .256$, $p = .001$), and antisocial symptoms ($r = .253$, $p = .001$), as shown below in Table 2.

Table 2. Correlation Between Social Comparison and Personality Traits (N = 174).

Variable	Antisocial	Borderline	Histrionic	Narcissistic	Obsessive	Avoidant	Dependent
Social Comparison	.253**	.440**	.534**	.466**	.256**	.342**	.489**

Regression Analysis

Multiple linear regression analyses were performed to examine the predictive ability of digital social comparison on symptoms of personality disorders. Results has indicated that digital social comparison significantly

predicted elevated symptoms across both Cluster B and Cluster C disorders. Notably, social comparison was a significant predictor for histrionic symptoms (β = .534, t = 8.26, p < .001), dependent symptoms (β = .489, t = 7.34, p < .001), narcissistic symptoms (β = .466, t = 6.91, p < .001), borderline symptoms (β = .440, t = 6.42, p < .001), avoidant symptoms (β = .342, t = 4.76, p < .001), obsessive-compulsive symptoms (β = .256, t = 3.48, p = .001), and antisocial symptoms (β = .253, t = 3.43, p = .001). Regression analysis outcomes have been summarized in Table 3.

Table 3. Coefficients of Regression Analysis Predicting Personality Disorders from Social Comparison (N = 174).

Dependent Variable	B	Std. Error	β	t	Sig.
Antisocial	0.077	0.022	0.253	3.429	0.001
Borderline	0.169	0.026	0.440	6.417	0.000
Histrionic	0.189	0.023	0.534	8.260	0.000
Narcissistic	0.157	0.023	0.466	6.907	0.000
Obsessive-Compulsive	0.086	0.025	0.256	3.484	0.001
Avoidant	0.125	0.026	0.342	4.764	0.000
Dependent	0.149	0.020	0.489	7.338	0.000

These findings indicate a strong predictive relationship between elevated engagement in digital social comparisons and increased severity of personality disorder symptoms within university students, further emphasizing the potential psychological risks associated with extensive social media use.

DISCUSSION

The current study aimed to investigate the predictive roles of digital social comparison on the severity of personality disorder symptoms, particularly within the Cluster B and Cluster C disorders among university students. The study findings provide strong empirical support for the earlier theoretical frameworks and literature; our results have indicated significant predictive relationships between increased digital social comparison and an elevation in the symptoms across both clusters of personality disorders. Similarly, borderline symptoms, commonly characterized by constant instability in self-image and social relationships, may be exaggerated by the brief validation and inconsistent fluctuating social feedback inherent in digital platforms (Collins & Grant, 2025). These further suggest that digital social comparison significantly predicts the severity of Cluster B personality disorder symptoms.

The findings of our study align closely with the Social Comparison Theory (Festinger, 1954), suggesting that digital platforms further amplify regular exposure to social comparisons, subsequently increasing the user's vulnerability to maladaptive psychological outcomes. Explicitly, associations of significance were found between digital social comparison and histrionic, dependent, and narcissistic personality symptoms, supporting previous evidence that social media exacerbates personality disorders defined by an increased need for external validation and attention-seeking behaviors (Yang & Crespi, 2025; Akça et al., 2020).

Additionally, the study findings extend to Cluster C disorders, where digital social comparison has been established as a significant predictor of avoidant, dependent, and obsessive-compulsive personality traits. This is in alignment with the Compensatory Internet Use Model (Kardefelt-Winther, 2014), where university students excessively engage with social media as a coping mechanism for deprived psychological needs or emotional distress. This model focused on the explanation of the significant predictive relationship observed with dependent personality disorder symptoms, as these individuals may excessively seek online reassurance and validation, perpetuating their dependency on them, and anxiety (Musetti et al., 2022).

Consistent with cognitive-behavioral models, the study's findings highlight how the pre-existence of psychological vulnerabilities linked with personality disorders, such as borderline instability and obsessive-compulsive perfectionism, can lead to various problematic social media behaviors as maladaptive coping mechanisms (Ahmed & Vaghefi, 2021). The observed predictive relationships for borderline, avoidant, and obsessive-compulsive symptoms underline the role digital platforms play in aggravating pre-existing vulnerabilities through constant and often harmful comparisons.

The results further demonstrate that the increased social comparison is significantly predictive of Cluster B symptoms; particularly narcissistic, histrionic, and borderline symptoms. This finding reinforces recent literature highlighting how narcissistic symptoms are increased through constant self-promotion and validation-seeking behaviors digitally (Yang & Crespi, 2025; Kong et al., 2021). Clinical implications suggest targeted interventions that incorporate cognitive-behavioral strategies and psychoeducation focused on mitigating maladaptive comparison tendencies and promoting healthier digital habits. Preventative measures could include university-

based workshops and digital literacy programs, aiming to enhance students' resilience and critical engagement with social media.

The investigated influence of social media intensity and frequency on symptom severity, indicating that increased digital engagement acts as a magnifying lens for maladaptive personality traits. This aligns well with the findings of Musetti et al. (2022), who pointed out that constant social media use serves as a coping behavior for individuals with underlying personality vulnerabilities. The current study's results indicated that high levels of engagement not only facilitate more opportunities for social comparison but also exacerbates the psychological impact of these comparisons. This is particularly noticeable in both Cluster B and Cluster C symptoms, where individuals exposed to frequent comparison loops may experience intensified symptoms over time.

This study offers several strengths, including its concentration on the intricate relationship between digital social comparison and personality disorder symptoms, a healthy sample size of university students, and the implementation of validated assessment tools that exhibit strong internal consistency. However, several limitations are to be considered. The cross-sectional design limits causal inferences, and the reliance on self-report measures may introduce bias due to social desirability or inaccurate self-perception. Additionally, as the sample had been drawn from university campuses, this recruitment approach may limit the generalizability of the findings to other populations. However, despite these limitations, the study's implications remain to be substantial, highlighting the importance of addressing maladaptive comparison tendencies within therapeutic settings. Psychological interventions utilizing cognitive-behavioral techniques and digital literacy education may help further manage the negative psychological impact of excessive social media engagement, mostly for individuals vulnerable to Cluster B and Cluster C personality pathology. Future longitudinal studies with more diverse samples are warranted to further investigate the causal pathways and enhance clinical applications.

CONCLUSIONS

This study provides empirical evidence that further reinforces the predictive impact within the digital social comparison realm in exacerbating Cluster B and Cluster C personality disorder symptoms among university students. The study's findings align with past theoretical frameworks in previous literature such as Social Comparison Theory and the Compensatory Internet Use Model, further highlighting the negative psychological impact caused by the abnormal usage of social media. While acknowledging the study's limitations such as the utilization of design and self-report methods, our results emphasize the urgent need for targeted psychological interventions and employing digital literacy programs. Future research engaging in longitudinal designs and multi-method assessments can provide an intricate, deeper insights into these complex relationships, paving the way for effective mental health strategies in the increasingly digital social landscape.

Abbreviations
The following abbreviations are used in this manuscript:

INCOM	Iowa-Netherlands Comparison Orientation Measure
BPD	Borderline Personality Disorder
NPD	Narcissistic Personality Disorder
OCPD	Obsessive-Compulsive Personality Disorder

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