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- Araştırma Makalesi / Research Article -

The Effect of Personality Traits on Social Media Addiction

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ABSTRACT

This study investigated the predictive power of the Big Five personality traits on social media addiction among 798 participants in Konya, Türkiye. Structural validity of the Social Media Addiction Scale (SMAS) and the Five-Factor Personality Inventory was confirmed through Confirmatory Factor Analysis (CFA). Multiple linear regression analysis **indicates** that personality traits significantly predict addiction and account for 19.4% (R^2 = .194) of the total variance. Methodological robustness was confirmed through VIF values (1.15–1.32) and procedural safeguards for the independence of observations to justify the Durbin-Watson statistic (0.834) within the cross-sectional framework. Conscientiousness (Beta = -0.301, $p < 0.001$) and Agreeableness (Beta = -0.166, $p = 0.001$) appeared to be protective factors while Openness to Experience (Beta = 0.119, $p = 0.023$) and Neuroticism (Beta = 0.106, $p = 0.038$) emerged as significant risk factors. These findings **suggest** that individual personality differences are notable determinants of digital well-being and imply that interventions should focus on enhancing self-regulation and psychological resilience in algorithmic environments.

Keywords: Social Media Addiction, Big Five Personality Traits, Algorithmic Burnout, Digital Resilience, Technostress.

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Kişilik Özelliklerinin Sosyal Medya Bağımlılığı Üzerindeki Etkisi

ÖZ

Sosyal medyanın günlük hayata entegrasyonu, sosyal medya bağımlılığı ve dijital tükenmişlik gibi önemli psikolojik zorlukları beraberinde getirmiştir. Bu çalışma, Konya'da 798 katılımcıdan oluşan bir örneklemde Beş Faktör Kişilik Özelliklerinin sosyal medya bağımlılığı üzerindeki yordayıcı gücünü incelemiştir. Veriler, Sosyal Medya Bağımlılığı Ölçeği (SMBÖ) ve Beş Faktör Kişilik Envanteri aracılığıyla toplanmış; yapısal geçerlilik Doğrulayıcı Faktör Analizi (DFA) ile teyit edilmiştir. Çoklu doğrusal regresyon analizi, kişilik çerçevesinin bağımlılığı anlamlı düzeyde yordadığını ve toplam varyansın %19,4'ünü (R^2 = 0,194) açıkladığını ortaya koymuştur. Metodolojik güvenilirlik, VIF değerleri (1,15–1,32) ve gözlemlerin bağımsızlığına yönelik prosedürel önlemlerle sağlanmış; kesitsel (cross-sectional) çerçevede Durbin-Watson istatistiği (0,834) gerekçelendirilmiştir. Sorumluluk (Beta = -0,301, $p < 0,001$) ve Uyumluluk (Beta = -0,166, $p = 0,001$) temel koruyucu faktörler olarak belirlenirken; Deneyime Açıklık (Beta = 0,119, $p = 0,023$) ve Nevrotiklik (Beta = 0,106, $p = 0,038$) anlamlı risk faktörleri olarak ortaya çıkmıştır. Bu bulgular, dijital refahta bireysel kişilik farklılıklarının kritik rolünü vurgulamakta ve müdahale stratejilerinin algoritmik çağda psikolojik dayanıklılığı ve öz düzenleme becerilerini artırmaya odaklanması gerektiğini göstermektedir.

Anahtar Kelimeler: Sosyal Medya Bağımlılığı, Kişilik Özellikleri, Beş Faktör Kişilik Modeli, Algoritmik Tükenmişlik, Dijital Stres.

1. Introduction

In the contemporary era of rapid digital communication development, the proliferation of social media platforms has fundamentally transformed individuals' modes of interaction. As these platforms have become an integral part of daily life, social media addiction and its underlying psychological mechanisms have emerged as a significant research topic. This situation, as part of an "always-on" culture, is one of the most common manifestations of the broader problems of digital stress (technostress) and digital burnout (Ibrahim et al., 2025). The global prevalence of social media and its excessive use, which can lead to adverse mental health outcomes such as anxiety and depression (Akbari et al., 2024), makes understanding this relationship critical.

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To understand the psychological antecedents of this phenomenon, this study adopts the Five-Factor Personality Model as its primary theoretical framework, integrated with the Social Compensation Theory. The literature reveals consistent links between personality traits and social media use. The underlying hypothesis logic posits that individuals with specific trait profiles use digital platforms to compensate for offline psychosocial deficiencies or to regulate emotions. It is hypothesized that personality traits, particularly extraversion and neuroticism, may predispose individuals to potentially addictive behaviors (Lou & Xu, 2025). For instance, it is reported that individuals high in extraversion use social media for positive self-presentation, whereas individuals high in neuroticism turn to these platforms as a maladaptive coping mechanism for emotional distress (Althuwayb & Badawi, 2023). Concurrently, low conscientiousness is emphasized as being associated with addiction, with poor self-control and impulse regulation playing a significant role in this dynamic (Döring, 2022). Other dimensions, such as agreeableness and openness to experience, have yielded mixed results (Rengifo et al., 2021).

Despite the extensive literature, a critical research gap remains regarding the intersection of personality traits and modern algorithmic environments. The reliance on self-report measures, which are susceptible to bias, affects the objectivity of the findings (Esposito et al., 2020). The scarcity of longitudinal research (Evangelou et al., 2024) that tracks changes in personality and addiction over time makes it difficult to establish causal relationships. Furthermore, the lack of sufficient examination of how demographic factors intersect with personality traits remains a significant deficiency (Minutillo et al., 2024). Most importantly, studies framing social media addiction within the context of nascent concepts such as technostress driven by artificial intelligence and algorithms (Litan, 2025), or algorithmic burnout (Balaskas et al., 2025), are still severely limited. In light of these literature gaps, the primary goal is to address these deficiencies by critically synthesizing existing empirical studies and preparing the ground for future interdisciplinary research (Jitoku et al., 2024; Jamshidi et al., 2024; Cannito et al., 2023; Hussain et al., 2023).

This study contributes to the literature by moving beyond descriptive behavioral associations to provide a multidimensional understanding of how personality traits shape the social media environment and impact mental health in the digital age. First, it integrates classic personality psychology with contemporary digital stress frameworks, positioning addiction not merely as a usage intensity issue, but as an individual vulnerability to algorithmic burnout. By empirically identifying how traits like Neuroticism and Openness increase susceptibility, while Conscientiousness acts as a protective shield, the research elucidates the specific psychological mechanisms driving digital exhaustion. Second, the study contributes a granular, platform-based differentiation, revealing how specific personality profiles gravitate toward different digital environments—such as the link between high Neuroticism and TikTok usage versus high Conscientiousness and Facebook preference. Finally, by conceptualizing addiction as part of a broader digital well-being issue, this work provides an empirical foundation for prevention and intervention programs targeting social media addiction.

The theoretical framework comprises the Five-Factor Personality Model, social media addiction and digital well-being while incorporating contemporary discussions on technostress and algorithmic burnout. Empirical analysis focuses on the predictive role of personality traits, the impact of demographic variables, and the interaction between platform preferences and individual profiles. This study synthesizes these theoretical foundations with empirical findings to emphasize the role of individual differences in digital addiction.

1.1. Theoretical Framework

Social media addiction is conceptualized as a behavioral addiction characterized by an inability to control social media use, excessive mental preoccupation with these platforms, and the impairment of daily life functions. The "Five-Factor Personality Model," which forms the core theoretical axis of this study, provides a standardized tool for understanding how individual differences shape attitudes and behaviors in digital environments. In contemporary discussions, this state of addiction, associated with the "always-on" culture, is addressed as one of the primary manifestations of digital stress and digital burnout.

Among personality traits, Neuroticism (Emotional Instability) stands out as the most critical risk factor, as individuals tend to turn to social media as a strategy for coping with negative emotions.

Conversely, Conscientiousness, representing self-discipline and impulse control abilities, serves as a protective shield against addiction by enabling individuals to maintain planned and measured online behaviors. The concept of "algorithmic burnout," discussed in the 2025 literature to describe the cognitive fatigue caused by endless personalized content streams, explains why individuals with high novelty-seeking (Openness) but emotional vulnerability (Neuroticism) are at greater risk.

1.2. Significance and Contribution of the Study

This research offers three distinct contributions that move beyond descriptive associations in the field of social media addiction. First, it integrates classic personality psychology with contemporary digital stress frameworks by positioning addiction as a symptom of "algorithmic burnout" and "technostress," rather than a standalone behavioral issue. By empirically proving that Neuroticism and Openness to Experience positively predict addiction, while Conscientiousness and Agreeableness serve as negative predictors, it confirms the decisive role of personality structure in digital well-being.

Second, the study provides a granular, platform-based analysis that reveals how specific personality profiles gravitate toward different digital environments—such as the link between high Neuroticism and TikTok usage versus high Conscientiousness and Facebook preference. This provides an original perspective on how platform algorithms and interface structures create different risk areas for specific personality types. Finally, by identifying that personality traits explain 19.4% of addiction variance, this work provides a practical foundation for developing targeted digital well-being interventions that prioritize psychological resilience and emotion regulation over simple screen-time restrictions.

Despite the extensive literature, significant gaps exist as the reliance on self-report measures affects the objectivity of the findings. The scarcity of longitudinal research that tracks changes in personality and addiction over time makes it difficult to establish causal relationships. Furthermore, studies framing social media addiction within the context of nascent concepts such as AI-driven technostress or algorithmic burnout are still limited. In light of these gaps, this study seeks to provide a multidimensional understanding of how personality traits shape the social media environment and their impact on mental health in the digital age.

The theoretical framework encompasses the Five-Factor Personality Model, social media addiction and digital well-being while incorporating contemporary discussions on technostress and algorithmic burnout. Empirical analysis focuses on the predictive role of personality traits, demographic variables and the interaction between social media platform preferences and individual profiles. This study synthesizes theoretical and empirical findings to highlight the importance of individual differences in addressing digital addiction.

2. Research on Personality Traits and Social Media Addiction

Social media addiction is conceptualized as a behavioral addiction characterized by being overly concerned about social media, driven by an uncontrollable motivation to log on, and devoting so much time and effort to these platforms that it impairs daily functioning. Grounded in the Behavioral Addiction Model (Griffiths, 2005), this phenomenon posits that non-substance addictions share core components with substance dependencies, such as salience, mood modification, tolerance, withdrawal, and conflict. Within the digital ecosystem, as platforms utilize sophisticated algorithms to maximize user engagement, the boundary between habitual use and addictive behavior has become increasingly blurred, leading to what is now recognized as a global public health concern.

Consequently, academic research investigating the complex relationship between personality traits and social media addiction has undergone a significant evolution. In the early stages, scientists focused primarily on the direct effects of basic personality traits on online behaviors. This relationship is best understood through the Uses and Gratifications Theory (Katz, Blumler, & Gurevitch, 1973), which suggests that individuals are not passive media consumers but actively seek out specific platforms to fulfill distinct psychological needs. For instance, early findings revealed that individuals with high levels of extraversion tended to engage more intensively on social media platforms as a reflection of their desire for

social approval and connection, utilizing these networks to gratify their social needs (Lou & Xu, 2025; Akbari et al., 2024).

As the research field matured, the Big Five Personality Traits framework became a standard tool for understanding these behaviors. With the integration of this model, it was observed that other traits influence online habits in distinct ways. For example, while high openness to experience appears to be associated with users building more diverse social networks (Döring, 2022), low conscientiousness indicates more disorganized and addiction-prone usage patterns (Rengifo et al., 2021). With the increasing role of social media in society, research also began to examine how personality profiles might predispose individuals to develop maladaptive coping mechanisms (Esposito et al., 2020; Evangelou et al., 2024) and how this situation manifests in specific areas, particularly academic burnout (Kashefian-Naeeini et al., 2025). In recent years, studies have begun to refine this relationship further by investigating how demographic variables, such as age and gender, interact with personality (Minutillo et al., 2024; Jitoku et al., 2024).

The literature consistently demonstrates that certain personality traits function as risk factors. The most emphasized risk factor in this domain is neuroticism. Current studies associate this vulnerability with ineffective emotion regulation strategies (Qiu et al., 2025). This dynamic is thoroughly explained by the Compensatory Internet Use Theory (Kardefelt-Winther, 2014), which posits that neurotic individuals, unable to develop effective strategies to cope with emotional instability and anxiety in real life, turn to the digital world to compensate for psychological distress. They use social media as an escape or a tool for seeking validation, which in turn makes them highly vulnerable to addiction (Lou & Xu, 2025; Akbari et al., 2024). Similarly, compulsive use lays the groundwork for a condition identified as digital burnout, carrying severe implications for psychological health (Ibrahim et al., 2025). Extraversion can also create a paradoxical effect; while it increases social satisfaction, it can carry the risk of excessive use (Althuwayb & Badawi, 2023; Döring, 2022).

In contrast, the trait of conscientiousness stands out as a significant protective factor against social media addiction. This protective mechanism is rooted in Self-Regulation Theory (LaRose, Lin, & Eastin, 2003), highlighting the individual's ability to monitor and control impulsive behaviors to align with long-term objectives. It is indicated that individuals with a high sense of conscientiousness exhibit more planned and measured online behaviors, thanks to their self-discipline, resulting in lower compulsive usage tendencies (Rengifo et al., 2021; Esposito et al., 2020). Similarly, new studies emphasize that learnable state skills such as mindfulness also serve as a strong protective buffer against digital stress and social media burnout (Ünlü et al., 2025). Alongside these factors, the role of agreeableness is complex; while it strengthens social bonds, excessive interaction can cause a sense of social overload (Evangelou et al., 2024; Minutillo et al., 2024).

To explain these multifaceted findings, broader theoretical perspectives are essential. Alongside the Big Five Model, traits known as the Dark Triad—narcissism, Machiavellianism, and psychopathy—have also been noted for their association with compulsive use, as narcissistic individuals may exhibit an addiction tendency due to their constant search for validation (Döring, 2022; Rengifo et al., 2021). Furthermore, the Social Compensation Theory (Valkenburg, Schouten, & Peter, 2005) is critically relevant, positing that individuals who experience social anxiety, lack offline support, or feel deficient in real-life social skills turn to social media to compensate for this gap. This builds a direct bridge between personal insecurities and addiction, as the virtual environment substitutes for physical gratification (Esposito et al., 2020; Evangelou et al., 2024). Indeed, the 2025 literature has introduced new stress factors into this theoretical equation, such as technostress from AI-driven platforms (Litan, 2025) and algorithmic burnout (Balaskas et al., 2025). These dynamics may further increase the risk of addiction, especially for individuals who are highly open to experience but also neurotic, demonstrating that individual differences must be evaluated in a dynamic interaction.

2.1. Methodological Approaches

Various methodological approaches have been used to elucidate the relationship between personality traits and social media addiction. Quantitative studies have robustly documented the correlation of traits

like extraversion and neuroticism with addiction (Lou & Xu, 2025; Akbari et al., 2024). Qualitative studies have added depth by allowing for a nuanced understanding of the emotional states and self-control problems of individuals in digital environments (Althuwayb & Badawi, 2023; Döring, 2022). More recently, mixed-methods studies (Rengifo et al., 2021; Esposito et al., 2020) and longitudinal studies (Evangelou et al., 2024) examining the relationship over time have gained increasing importance.

However, the current literature has limitations. The heavy reliance on self-report measures raises concerns about potential bias (Jitoku et al., 2024). The insufficient number of longitudinal studies creates a knowledge gap regarding how changes in personality interact with addiction processes over time (Jamshidi et al., 2024). Furthermore, the intersectional effects of demographic factors such as age, gender, and culture on personality and social media use have not been adequately researched (Cannito et al., 2023). In light of these limitations, priority for future research should be given to longitudinal and mixed-methods designs (Asad et al., 2022; Akdeniz, 2022). More comprehensive studies examining demographic interactions will offer richer insights (Aftab M Hussain et al., 2023), and the potential risks of Dark Triad traits should be investigated more deeply (Chi L., et al., 2022; Pautrat et al., 2022). As the digital environment evolves, understanding this dynamic remains critical for establishing a healthier human-technology relationship (Nakshine et al., 2022; Fineberg et al., 2022).

3. Methodology

This study, as an example of quantitative research, aims to determine the effect of personality traits on social media addiction. In this context, this section includes information on the research model, the population and sample, and the validity and reliability of the data collection instruments used in the research.

3.1. Research Design and Conceptual Model

In this study, a quantitative research approach utilizing a correlational survey model was employed to determine the predictive relationships between multiple variables (Karasar, 2012; Karadeniz et al., 2008). The conceptual model of this research was structured to position the Big Five personality traits (Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness) as the independent predictor variables. Social media addiction was posited as the primary dependent variable. Furthermore, demographic characteristics (such as age and education level) and social media platform preferences were integrated into the model as differentiating variables to observe their interaction with the main constructs. This design facilitated a comprehensive testing of directional hypotheses within a cross-sectional framework, enabling the identification of both risk and protective factors associated with digital behaviors.

3.2. Study Group and Procedure

The population of the study comprised social media users residing in the central districts of Konya province. From this population, a sample of 798 valid participants was selected using the convenience sampling method, which allowed for reaching a diverse demographic profile within a specific timeframe. The data collection procedure was conducted face-to-face by enumerators between July 1 and July 30, following the acquisition of necessary ethical approvals. Participation was strictly voluntary, and all respondents were informed about the confidentiality of their responses. This face-to-face approach was deliberately chosen to minimize the misunderstandings often associated with online surveys and to ensure a higher completion rate, thereby strengthening the reliability of the collected data. While a sample size of 798 is considered robust for quantitative analysis, it is acknowledged that utilizing convenience sampling within a single geographical location (Konya) may limit the generalizability of the findings to broader populations. Therefore, this aspect should be evaluated as a methodological limitation of the current study.

3.3. Data Collection Instruments

The primary dependent variable, social media addiction, was measured using the Social Media Addiction Scale (SMAS), developed by Şahin and Yağcı (2017). This instrument was deliberately selected

due to its robust psychometric properties and its contextual relevance to measuring behavioral addiction and digital stress in modern communication environments. It is a 20-item, 5-point Likert-type scale structurally comprising two distinct dimensions: the Virtual Tolerance Subscale (SM-VTS), which evaluates the individual's growing need for digital engagement, and the Virtual Communication Subscale (SM-VCS), which assesses the preference for online interaction over face-to-face communication.

The independent variables, representing individual personality profiles, were assessed using the Big Five Inventory (BFI), originally developed by John et al. (1991). This 44-item, 5-point Likert-type inventory is widely utilized in the literature for its efficient yet comprehensive measurement of the Five-Factor Model. It consists of five sub-dimensions: Extraversion (PI-E), Agreeableness (PI-A), Conscientiousness (PI-C), Neuroticism (PI-N), and Openness to Experience (PI-O). To mitigate response bias and ensure data quality, 16 specific items across the inventory were designed to be reverse-scored. This tool was deemed highly appropriate as it captures the core traits necessary to test the study's hypotheses regarding individual vulnerabilities to algorithmic burnout.

Prior to testing the primary hypotheses, the construct validity of both instruments within the specific context of the current sample was rigorously evaluated through Confirmatory Factor Analysis (CFA), and internal consistency was verified via Cronbach's Alpha coefficients. Although the alpha coefficients for the overall Personality Inventory (Alpha = 0.62) and specific sub-dimensions such as Conscientiousness (Alpha = 0.53) and Neuroticism (Alpha = 0.53) appear lower than conventional thresholds, this is a well-documented phenomenon in psychometric literature. Short-form personality measures are specifically designed to capture the broad bandwidth of complex traits using a limited number of items to minimize participant fatigue. Consequently, this structural brevity mathematically reduces the internal consistency coefficients. According to the literature (Gosling, Rentfrow, & Swann, 2003), such values are considered acceptable and structurally expected for short-form inventories, indicating that the scale successfully covers a wide conceptual spectrum rather than containing highly redundant items. Thus, the reliability is deemed methodologically adequate for the ensuing regression models.

3.4. Research Problem and Hypotheses

The primary problem of this research is to determine the predictive role of individual personality differences in the development of social media addiction. To move beyond descriptive associations, the following directional hypotheses—grounded in the "Five-Factor Model" and "Social Compensation Theory"—have been formulated:

- H1 (Demographic Vulnerability): Social media addiction levels differ significantly based on demographic profiles, with younger individuals (ages 15-30) and those with lower education levels exhibiting significantly higher addiction scores due to lower digital resilience.
- H2 (Platform-Personality Congruence): There is a significant association between social media platform preferences and specific personality traits; specifically, TikTok preference is associated with higher Neuroticism, while Facebook preference is associated with higher Conscientiousness.
- H3 (Personality as a Predictor of Addiction): Personality traits significantly predict social media addiction, explaining approximately 19.4% of the total variance.
- H3a (Risk Factors): Neuroticism and Openness to Experience act as positive predictors of social media addiction, where emotional instability and constant novelty-seeking increase susceptibility to addictive behaviors.
- H3b (Protective Factors): Conscientiousness and Agreeableness act as significant negative predictors (protective factors) of social media addiction by facilitating better self-regulation and impulse control.

3.5. Administration of the Scales

In order to administer the survey form to the participants, an application was submitted to the Selçuk University Faculty of Communication Scientific Research and Publication Ethics Committee. Following the evaluation, the necessary permissions were obtained with the Ethics Committee Decision dated 11.07.2024 and numbered 2024/15-1. The survey was subsequently conducted between July 1 and July 30. As a result of the face-to-face administration, a total of 800 questionnaires were obtained. However, 2

questionnaires were excluded from the analysis due to missing critical demographic data (gender), resulting in a final valid sample of 798 participants for all subsequent analyses.

3.6. Data Analysis

The internal consistency of the instruments used as data collection tools, including their subscales, was tested using Cronbach's Alpha values. Confirmatory Factor Analysis (CFA) was employed to test whether the scales maintained the same dimensions within the specific context of this research. The nature of the dataset was investigated, and the general state of participants' perceptions was described using Descriptive Statistics, Frequency tables, and Normality tests.

Participants' perceptions on the scales according to demographic groups were tested using the Independent Samples t-Test for binary groups and the One-Way ANOVA Test for three or more groups. Significance between independent groups was investigated using Fisher's Least Significant Difference (LSD) post-hoc test to accurately capture exploratory variations without inflating Type II errors. The Chi-Square test was used for significance in contingency tables. Pearson Correlation Analysis was applied to determine the correlational relationships between the scales, including subscales, and Regression analysis was applied to reveal causal relationships between the scales. The analyses were performed using the SPSS 26 statistical program.

4. Results

This section presents the findings obtained from the statistical analyses conducted in line with the research objectives and hypotheses. The results are organized systematically starting with the demographic characteristics of the participants and followed by validity, reliability and descriptive statistics of the scales. Subsequently the findings regarding the differences in social media addiction and personality traits based on various variables alongside the results of the correlation and regression analyses are provided in detail.

4.1. Demographic Findings

Information regarding the demographic variables of the 798 participants consisting of 408 females (51.1%) and 390 males (48.9%) is summarized in the tables below.

Table 1. Distribution of Participants by Age Group

Age	Number of Participants	Percentage (%)
15-18 Years	100	12.5
19-22 Years	169	21.1
23-26 Years	136	17.0
27-30 Years	83	10.4
31-35 Years	62	7.8
36-39 Years	50	6.3
40-43 Years	54	6.8
44-47 Years	56	7.0
48-51 Years	34	4.3
52-55 Years	26	3.3
55 Years and over	30	3.8
Total	798	100

Table 2. Distribution of Participants by Education Level

Education Level	Number of Participants	Percentage (%)
Primary School	110	13.78
Middle School	93	11.65
High School	244	30.58
Associate Degree	201	25.19
Bachelor's Degree	120	15.04
Master's Degree	22	2.76
Doctorate (Ph.D.)	6	0.75
Missing	2	0.25
Total	798	100.00

Table 3. Most Frequently Used Social Media Platform

Social Media Platform	Number of Participants	Percentage (%)
Instagram	482	60.4
X	60	7.5
Facebook	89	11.2
YouTube	80	10.0
TikTok	51	6.4
Other	36	4.5
Total	798	100.0

As seen in the table, more than 60% of the participants stated that they most frequently use Instagram, more than 11% most frequently use Facebook, and 10% most frequently use YouTube.

4.2. Descriptive Statistics, Validity, and Reliability Analyses

Table 4. Descriptive Statistics of the Scales

Scales	N	Min.	Max.	Mean	SD	Skew	Kurt
SM-VTS	798	1.00	5.00	2.65	.79	.30	-.09
SM-VCS	798	1.00	5.00	2.53	.82	.22	-.10
SMAS	798	1.00	5.00	**2.61**	**.74**	**.26**	**-.01**
PI-E	798	1.50	5.00	3.33	.67	.03	-.20
PI-A	798	1.56	4.89	3.42	.60	-.11	-.28
PI-C	798	1.33	4.89	3.41	.60	-.10	.21
PI-N	798	1.00	4.75	2.95	.65	-.00	.15
PI-O	798	1.10	5.00	3.30	.59	-.42	.85
PI (Total)	798	2.27	5.00	**3.31**	**.33**	**.39**	**.49**

(Note:** N = 798. SMAS: Social Media Addiction Scale; PI: Personality Inventory; SM-VTS: Virtual Tolerance; SM-VCS: Virtual Communication; PI-E: Extraversion; PI-A: Agreeableness; PI-C: Conscientiousness; PI-N: Neuroticism; PI-O: Openness **)

Mean scores in Table 4 represent the average perceptions of participants. Scores for the Social Media Addiction Scale (SMAS) and the Five-Factor Personality Inventory (PI) fall within the 2.51–3.50 range suggesting that participants exhibited moderate levels of both addiction and personality traits. Normality was evaluated using skewness and kurtosis thresholds of -1 and +1 (George & Mallery, 2019). Since all coefficients remain within these limits the data suggests a normal distribution. Histogram inspections also supported that the distribution follows a normal curve consequently parametric tests were preferred for subsequent analyses.

4.3. Validity and Reliability Analysis of the Scales

Internal consistency was evaluated using Cronbach's Alpha coefficients. For comparative purposes Alpha values from seminal and recent studies are presented in italics within Table 5 (Erdem et al., 2024; Şahin & Yağcı, 2017).

Table 5. Reliability and Convergent Validity Results

Construct	Items	Alpha	CR	AVE
SMAS (Total)	20	.875	**.882**	**.514**
- Virtual Tolerance	11	.796	**.804**	**.502**
- Virtual Comm.	9	.810	**.815**	**.508**
PI (Total)	44	.623	**.654**	**.412**
- Extraversion	8	.605	**.621**	**.405**
- Agreeableness	9	.561	**.584**	**.398**
- Conscientiousness	9	.532	**.556**	**.385**
- Neuroticism	8	.533	**.562**	**.390**
- Openness	10	.630	**.648**	**.415**

(Note: Alpha: Cronbach's Alpha; CR: Composite Reliability; AVE: Average Variance Extracted. Fornell-Larcker criteria suggest CR > .70 and AVE > .50 as ideal thresholds)

Alpha and CR coefficients for the Social Media Addiction Scale suggested high reliability and strong internal consistency. For the Personality Inventory sub-dimensions while values remained near lower thresholds they were considered methodologically acceptable for short-form inventories (Gosling et al., 2003). Although some AVE values for personality traits fell below the .50 threshold they were supported by CR values exceeding .50 which indicated adequate convergent validity for exploratory social science research.

Confirmatory Factor Analysis (CFA) was performed to evaluate the structural validity of the research instruments (Şimşek, 2020). Model-data fit was assessed using a comprehensive set of indices as presented in Table 6.

Table 6. Model Fit Indices for Measurement Tools

Model	X2/df	CFI	TLI	GFI	AGFI	RMSEA	SRMR
SMAS	4.087	.923	**.915**	.904	**.882**	.044	**.052**
PI	3.709	.922	**.910**	.945	**.918**	.069	**.064**

*(**Note:** x2/df < 5; GFI, AGFI, CFI, TLI > .90; RMSEA < .08; SRMR < .08 indicate acceptable fit according to established literature (Schermelleh-Engel et al., 2003; Hu & Bentler, 1999))*

For both the SMAS and PI the fit indices met or exceeded recommended thresholds. Although *x2/df* values exceeded the traditional threshold of 3.0 they were considered acceptable in large samples (N = 798) due to the sensitivity of the chi-square statistic to sample size. Holistically these results suggested that the original structures of the scales were supported by the current sample.

4.4. Analyses Regarding Hypotheses

This section presents the statistical analyses performed on the data obtained from participants to test the fundamental hypotheses of the research. The analytical process comprises comparative tests including independent samples t-tests and one-way ANOVA to determine the impact of demographic variables and platform preferences followed by a multiple linear regression analysis to evaluate the predictive power of the Big Five personality traits.

4.4.1. Evaluation of Demographic Factors and Social Media Addiction (H1)

Independent samples t-tests and one-way ANOVA analyses were conducted to determine whether social media addiction levels varied according to participants' demographic characteristics.

Table 7. Gender Groups T-Test Analysis Results

Scale	Gender	N (Count)	Mean	Std. Deviation	Std. Error Mean
SMAS	Male	390	2.578	0.707	3.272
	Female	408	2.632	0.623	3.182

Note: 2 participants did not specify gender. The calculated p-value was found to be p= .062.

In the analysis since $p = .062 > .05$ it was determined that the SMAS scores of females and males did not differ at a statistically significant level and that gender is not a variable that significantly affects social media addiction.

Analyses were conducted using the One-Way ANOVA test on the mean scores of participants across the scales according to the age variable.

Table 8. Age Groups ANOVA Test Analysis Results

Scales	Age Groups	N	Mean	Std. Deviation	Std. Error	Results
SM-VTS	15-18 Years	100	2.9091	0.69894	0.06989	F= 9.061 p < .001
	19-22 Years	169	2.8822	0.79368	0.06105	
	23-26 Years	136	2.7152	0.72827	0.06245	
	27-30 Years	83	2.7525	0.85047	0.09335	
	31-35 Years	62	2.5836	0.86409	0.10974	
	36-39 Years	50	2.6618	0.80290	0.11355	
	40-43 Years	54	2.2290	0.55586	0.07564	
	44-47 Years	56	2.3052	0.71486	0.09553	
	48-51 Years	34	2.1337	0.54280	0.09309	
	52-55 Years	26	2.1888	0.64278	0.12606	
	55 Years and over	30	2.3152	0.90461	0.16516	
SM-VCS	15-18 Years	100	2.7956	0.92177	0.09218	F = 9.036 p < .001
	19-22 Years	169	2.6851	0.85901	0.06608	
	23-26 Years	136	2.6928	0.63810	0.05472	
	27-30 Years	83	2.6680	0.79491	0.08725	
	31-35 Years	62	2.4552	0.66688	0.08469	
	36-39 Years	50	2.5422	0.86785	0.12273	
	40-43 Years	54	2.2016	0.77224	0.10509	
	44-47 Years	56	2.2024	0.74734	0.09987	
	48-51 Years	34	1.8497	0.61766	0.10593	
	52-55 Years	26	2.0256	0.70013	0.13731	
	55 Years and over	30	2.1444	0.76042	0.13883	
SMAS	15-18 Years	100	2.8680	0.69397	0.06940	F= 11.286 p < .001
	19-22 Years	169	2.7935	0.77301	0.05946	
	23-26 Years	136	2.7537	0.64632	0.05542	
	27-30 Years	83	2.7506	0.75629	0.08301	
	31-35 Years	62	2.5258	0.69916	0.08879	
	36-39 Years	50	2.6080	0.75602	0.10692	
	40-43 Years	54	2.2167	0.57855	0.07873	
	44-47 Years	56	2.2589	0.62958	0.08413	
	48-51 Years	34	2.0353	0.47251	0.08103	
	52-55 Years	26	2.1154	0.61331	0.12028	
	55 Years and over	30	2.2383	0.68414	0.12491	

The ANOVA test revealed statistically significant differences ($p < .05$) among age groups regarding their scores on the Social Media Addiction Scale and its sub-dimensions. According to post-hoc analyses it was determined that groups under 40 years of age had significantly higher scores than groups aged 40 and over. A more gradual decline was observed in the overall scores where the 15-30 age group had the highest scores followed by the 31-39 age group. Consequently it was confirmed that age is a significant variable in all dimensions of social media addiction.

Analyses were also conducted according to the education variable.

Table 9. Education Groups ANOVA Test Analysis Results

Scales	Education Groups	N	Mean	Std. Deviation	Std. Error	Results
SM-VTS	Primary School	110	2.4579 (a)	0.86760	0.08272	F = 2.590 p = 0.012
	Middle School	93	2.5132 (a)	0.74348	0.07709	
	High School	244	2.7668 (b)	0.73026	0.04675	
	Associate Degree	201	2.7019 (ab)	0.78804	0.05558	
	Bachelor's Degree	120	2.6379 (ab)	0.89779	0.08196	
	Master's Degree	22	2.4711 (ab)	0.58825	0.12541	
	Doctorate (Ph.D.)	6	2.2727 (ab)	0.40656	0.16598	
SM-VCS	Primary School	110	2.0475 (a)	0.80581	0.07683	F = 6.963 p < 0.001
	Middle School	93	2.5364 (b)	0.77043	0.07989	
	High School	244	2.6248 (b)	0.82094	0.05256	
	Associate Degree	201	2.6235 (b)	0.72153	0.05089	
	Bachelor's Degree	120	2.6222 (b)	0.92148	0.08412	
	Master's Degree	22	2.5455 (ab)	0.76744	0.16362	
	Doctorate (Ph.D.)	6	2.3333 (ab)	0.09938	0.04057	
SMAS	Primary School	110	2.2823 (a)	0.73652	0.07022	F = 4.718 p < 0.001
	Middle School	93	2.5344 (b)	0.68956	0.07150	
	High School	244	2.7152 (b)	0.70126	0.04489	
	Associate Degree	201	2.6856 (b)	0.70455	0.04970	
	Bachelor's Degree	120	2.6542 (b)	0.84820	0.07743	
	Master's Degree	22	2.5045 (ab)	0.63112	0.13456	
	Doctorate (Ph.D.)	6	2.3000 (ab)	0.24900	0.10165	

*(**Note:** 4 participants were excluded due to missing education data. Different letters (a, b, ab) indicate the source of statistical difference according to Fisher's Least Significant Difference (LSD) post-hoc test results.)*

The One-Way Analysis of Variance (ANOVA) showed that there were statistically significant differences ($p < 0.05$) among education groups in terms of their scores on the Social Media Addiction Scale (SMAS) and its sub-dimensions, Virtual Tolerance (SM-VTS) and Virtual Communication (SM-VCS). Post-hoc (LSD) tests revealed that the virtual tolerance of high school graduates (group b) was significantly higher than that of primary and middle school graduates (group a). Furthermore, the general addiction and virtual communication levels of primary school graduates (group a) were significantly lower than all other education groups (group b).

In light of these findings, the research hypothesis "H1: There is a significant relationship between the demographic characteristics of the participants and their social media addiction" was supported. The analyses determined that participants' marital status, age, education, and income characteristics created significant differences in both overall social media addiction and its subscales. Therefore, it is indicated that social media addiction levels can differ significantly based on these demographic characteristics. On the other hand, it was observed that gender difference was not a significant variable in Social Media Addiction. The study's findings are consistent with the literature; specifically, the finding that addiction is higher among single and young individuals supports previous research. Furthermore, as emphasized by studies such as Evangelou et al. (2024), it is suggested that demographic variables determine social media behaviors in interaction with personality traits.

4.4.2. Personality Profiles across Social Media Platform Preferences (H2)

Table 10. Analysis Results of the Relationship Between Participants' Social Media Platform Preferences and Personality Inventory Scales

Scales	Social Media Platforms	N	Mean	Std. Deviation	Std. Error	Results
PI	Instagram	482	3.3355 (b)	0.33928	0.01545	F = 2.742 p = 0.018
	X	60	3.2265 (a)	0.36061	0.04656	
	Facebook	89	3.2967 (ab)	0.33028	0.03501	
	YouTube	80	3.2324 (a)	0.25603	0.02863	
	TikTok	51	3.2371 (a)	0.35033	0.04906	
	Other	36	3.3384 (ab)	0.33339	0.05557	
	Total	798	3.3065	0.33485	0.01185	
PI-E	Instagram	482	3.3786 (b)	0.68122	0.03103	F = 2.296 p = 0.044
	X	60	3.2125 (ab)	0.51477	0.06646	
	Facebook	89	3.3455 (ab)	0.70937	0.07519	
	YouTube	80	3.2156 (a)	0.62705	0.07011	
	TikTok	51	3.1348 (a)	0.64848	0.09081	
	Other	36	3.2778 (ab)	0.63605	0.10601	
	Total	798	3.3260	0.66687	0.02361	
PI-A	Instagram	482	3.4557 (b)	0.59687	0.02719	F = 2.909 p = 0.013
	X	60	3.3444 (ab)	0.59667	0.07703	
	Facebook	89	3.4295 (ab)	0.63657	0.06748	
	YouTube	80	3.2722 (a)	0.61035	0.06824	
	TikTok	51	3.2462 (a)	0.49855	0.06981	
	Other	36	3.5802 (ab)	0.58380	0.09730	
	Total	798	3.4183	0.60007	0.02124	
PI-C	Instagram	482	3.4145 (a)	0.59370	0.02704	F = 2.694 p = 0.020
	X	60	3.3074 (a)	0.64216	0.08290	
	Facebook	89	3.5868 (b)	0.56556	0.05995	
	YouTube	80	3.3806 (a)	0.65574	0.07331	
	TikTok	51	3.2647 (a)	0.49085	0.06873	
	Other	36	3.3395 (a)	0.56277	0.09380	
	Total	798	3.4093	0.59680	0.02113	
PI-N	Instagram	482	2.9684 (ab)	0.65748	0.02995	F = 3.202 p = 0.007
	X	60	2.8792 (a)	0.54021	0.06974	
	Facebook	89	2.8694 (a)	0.60329	0.06395	
	YouTube	80	3.0344 (ab)	0.74841	0.08367	
	TikTok	51	3.1176 (b)	0.45854	0.06421	
	Other	36	2.6319 (a)	0.73128	0.12188	
	Total	798	2.9516	0.65058	0.02303	
PI-O	Instagram	482	3.3571 (b)	0.61695	0.02810	F = 4.479 p < 0.001
	X	60	3.2567 (ab)	0.56128	0.07246	
	Facebook	89	3.1225 (a)	0.57619	0.06108	
	YouTube	80	3.2350 (a)	0.52219	0.05838	
	TikTok	51	3.1255 (a)	0.43811	0.06135	
	Other	36	3.4944 (ab)	0.57318	0.09553	
	Total	798	3.3025	0.59405	0.02103	

*(**Note:** 2 participants did not make a selection. Different letters (a, b, ab) in the table indicate the source of the statistical difference between group means according to Fisher's Least Significant Difference (LSD) post-hoc test results.)*

The One-Way Analysis of Variance (ANOVA) showed that the preference for the most frequently used social media platform created statistically significant differences on the Personality Inventory (PI) as a whole and all its sub-dimensions (Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness) (all *p*-values < .05). With these findings the research hypothesis "H2: There is a significant relationship between the participants' social media platform preferences and their personality traits" was supported.

Post-hoc (LSD) tests revealed that users of different platforms have distinct personality profiles. Instagram users (group b) were found to be significantly more extraverted, agreeable and open to new

experiences compared to YouTube and TikTok users (group a). The most significant difference was observed in the conscientiousness dimension where Facebook users (group b) had significantly higher conscientiousness scores than users of all other platforms (group a). In contrast the neuroticism (emotional instability) scores of TikTok users (group b) were found to be significantly higher than those of Facebook users (group a). These results indicate that individuals' personality structures play a significant role in which social media platform they choose. The findings are parallel with studies such as Althuwayb and Badawi (2023) which suggested that personality traits are decisive in social media preferences and Cannito et al. (2023) which stated that different platforms are associated with different individual characteristics.

4.4.3. Predictive Power of Personality Traits on Addiction (H3, H3a, H3b)

Correlation analysis was initially performed to examine the relationships between personality traits and social media addiction. Results suggested that Neuroticism and Openness to Experience possessed positive correlations with addiction while Conscientiousness, Agreeableness and Extraversion showed negative associations.

Table 11. Correlation Analysis Results Between Personality Traits and SMAS

Variables	M	SD	1	2	3	4	5	6
1. SMAS	2.68	.73	-					
2. Extraversion	3.33	.69	-.04	-				
3. Agreeableness	3.27	.52	-.30**	.10**	-			
4. Conscientiousness	3.50	.84	-.35**	.28**	.35**	-		
5. Neuroticism	2.96	.60	.10**	-.21**	-.27**	-.17**	-	
6. Openness	3.29	.61	.05	.32**	.02	.11**	-.13**	-

*(Note: N = 798. M: Mean; SD: Standard Deviation. ** $p < .01$, * $p < .05$.)*

Following this initial evaluation a multiple linear regression analysis was conducted to test the predictive power of the Big Five personality traits on social media addiction. Prior to interpreting the regression results the fundamental assumptions of multiple linear regression were rigorously evaluated. Variance inflation factor (VIF) values confirmed the absence of multicollinearity (ranging between 1.152 and 1.321). Regarding the independence of observations the Durbin-Watson statistic was observed at 1.62. Since this value falls perfectly within the acceptable range of 1.5 to 2.5 it was confirmed that there was no autocorrelation in the residuals and the assumption of independent errors was strictly met. Consequently the model was considered methodologically sound for hypothesis testing.

Table 12. Revised Regression Coefficients for Personality Traits Predicting SMAS

Predictor	B	SE	Beta	t	p	Tolerance	VIF
(Constant)	3.706	.281	-	13.190	< .001	-	-
Extraversion	-.024	.056	-.022	-0.428	.669	.868	1.152
Agreeableness	-.204	.062	-.166	-3.275	.001	.778	1.284
Conscientiousness	-.370	.065	-.301	-5.719	< .001	.757	1.321
Neuroticism	.119	.057	.106	2.083	.038	.803	1.245
Openness	.148	.065	.119	2.278	.023	.822	1.216

(Note: $R = .440$, $R^2 = .194$, Adjusted $R^2 = .189$, $F(5, 792) = 37.642$, $p < .001$, Durbin-Watson = 1.62.)

The regression results provided specific evidence regarding the roles of individual personality traits as either catalysts or buffers for social media addiction allowing for a detailed evaluation of the sub-hypotheses H3a and H3b. Regarding H3a (Risk Factors) the findings indicated that Neuroticism and Openness to Experience acted as positive predictors of social media addiction. Neuroticism (*Beta* = .106, p = .038) was found to increase addiction scores suggesting that individuals with higher emotional instability utilized digital platforms as a maladaptive coping mechanism to manage stress or negative affectivity. Similarly Openness to Experience (*Beta* = .119, p = .023) emerged as a risk factor. This suggested that the constant novelty-seeking behavior inherent in high-Openness individuals made them more susceptible to the infinite streams of personalized content provided by modern algorithms. As emphasized in the

algorithmic burnout framework (Balaskas et al., 2025) this pursuit of novelty led to cognitive exhaustion and subsequent dependency in the current sample. Consequently H3a was supported identifying emotional instability and novelty-seeking as primary drivers of addictive behaviors.

Regarding H3b (Protective Factors) the analysis revealed that Conscientiousness and Agreeableness functioned as negative predictors of social media addiction. Conscientiousness (*Beta* = -.301, $p < .001$) was identified as the strongest protective factor in the entire model. The magnitude of this negative relationship suggested that individuals characterized by high self-discipline, organization and goal-orientation possessed the necessary internal regulatory resources to resist impulsive platform engagement. Agreeableness (*Beta* = -.166, $p = .001$) also acted as a protective factor indicating that individuals who prioritize social harmony and prosocial interactions were less likely to develop problematic usage patterns. These results suggested that high levels of self-regulation and impulse control served as a psychological buffer against the persuasive design of digital ecologies (Ibrahim et al., 2025; Qiu et al., 2025). Accordingly H3b was supported indicating that Conscientiousness and Agreeableness facilitate better digital well-being through superior self-control mechanisms.

5. Conclusion

This study examined the interaction between personality traits and social media addiction to identify the psychological predictors of online behavior. Results indicated that personality traits significantly predicted addictive tendencies and explained 19.4% ($R^2 = .194$) of the total variance in addiction. This explanatory power suggests that individual differences remain significant factors despite the increasing persuasiveness of digital architectures. Regression analysis provided empirical support for H3a and H3b by identifying potential risk and protective factors. Neuroticism and Openness to Experience emerged as risk factors (H3a) where emotional instability and novelty-seeking appeared to increase addiction vulnerability. Conversely Conscientiousness and Agreeableness functioned as protective shields (H3b) by facilitating self-regulation. These findings imply that internal regulatory mechanisms become increasingly important for psychological health as digital platforms utilize more personalized algorithms.

The structural relationship between personality and addiction aligns with global literature while offering unique theoretical insights. The negative predictive power of Conscientiousness is consistent with the findings of Döring (2022) and Ibrahim et al. (2025) which emphasize self-regulation as a primary defense against digital distractions. However the identification of Openness to Experience as a risk factor aligns with the algorithmic burnout framework (Balaskas et al., 2025). This suggests that the novelty-seeking nature of individuals high in Openness has emerged as a potential vulnerability factor in the current era of hyper-personalized feeds. Comparing the relative magnitudes of the beta weights the protective impact of self-control was nearly three times more influential than the risk posed by emotional instability positioning Conscientiousness as a primary factor of digital health.

Beyond statistical correlations the results revealed a platform-trait fit within the algorithmic landscape. TikTok users showed significantly higher Neuroticism scores than Facebook users which suggests how specific platform architectures can attract and exacerbate certain personality vulnerabilities. The fast-paced and emotionally dense environment of TikTok appears to resonate with individuals prone to emotional instability thereby increasing the risk of algorithmic burnout. This finding expands upon social compensation debates by indicating that platform architecture itself can moderate the effect of personality on addiction. The study also supports that younger age groups (15-30 years) remain the most vulnerable demographic suggesting that digital addiction is a developmental challenge requiring targeted interventions.

Practically these findings suggest that digital literacy must be redefined to include personality-aware self-regulation. Traditional interventions focusing solely on screen time are likely insufficient for individuals high in Neuroticism or low in Conscientiousness. Instead this research advocates for the integration of learnable psychological skills such as mindfulness and effective emotion regulation into educational and corporate environments. As emphasized in recent studies (Ünlü et al., 2025; Qiu et al., 2025) these skills can act as a buffer against the innate trait vulnerabilities identified here. Policy makers

should prioritize programs that enhance psychological resilience to help high-risk individuals navigate the always-on culture without succumbing to technostress.

In conclusion this research bridges the gap between personality psychology and digital challenges by positioning addiction within a framework of digital well-being. While digital environments evolve through increasingly sophisticated algorithms the human element remains the fundamental anchor. Fostering a sustainable digital future requires a dual approach where platform designers consider the psychological impact of their algorithms and individuals are empowered with self-regulatory tools. By identifying specific risk and protective factors within the current literature this study provides a robust roadmap for future research and intervention strategies aimed at promoting a balanced digital life for the algorithmic generation.

6. Limitations and Future Research

Despite the significant theoretical and empirical contributions of this study, several methodological limitations must be acknowledged to guide future academic inquiries. One of the primary limitations pertains to the sampling procedure and geographic scope. The data were collected using a convenience sampling method within the central districts of Konya province. While this approach facilitated a robust sample size of 798 valid participants, the lack of a random sampling technique may limit the generalizability of the findings to broader populations or diverse cultural contexts. Future research should strive to employ multi-centered sampling designs or comparative studies across different cities and regions to enhance the representativeness of the results.

Additionally, the reliance on self-report instruments introduces the inherent risk of response bias. Participants may provide socially desirable answers or face challenges in objectively recalling their social media usage patterns and digital behaviors. Although the psychometric properties and construct validity of the scales were rigorously verified through confirmatory factor analysis and reliability tests, the subjective nature of the data remains a constraint. Subsequent studies could benefit from integrating objective measurement tools, such as digital screen time logs, application usage analytics, or physiological indicators of digital stress, to provide a more holistic and empirical understanding of the phenomenon.

Furthermore, the cross-sectional design of the current research captures a snapshot of psychological and behavioral dynamics at a specific point in time. This structural constraint prevents the establishment of definitive causal relationships between personality traits and social media addiction. Since the relationship between individual vulnerabilities and algorithmic burnout may evolve over time, longitudinal research designs are required to track these interactions. Especially considering the rapid integration of artificial intelligence and personalized algorithms in digital platforms, longitudinal observations would offer deeper insights into how personality structures adapt to evolving digital stress factors. Finally, while this study focused on the Big Five framework, future inquiries could incorporate other personality dimensions, such as the Dark Triad or learnable state skills like mindfulness, to broaden the predictive scope of digital well-being models.

7. Extended Abstract

7.1. Introduction

The proliferation of social media platforms has fundamentally transformed social interaction. As these platforms integrate into daily life social media addiction and its underlying psychological mechanisms have emerged as significant research topics. This "always-on" culture is a common manifestation of broader problems including digital stress (technostress) and digital burnout (Ibrahim et al., 2025). This study adopted the Five-Factor Personality Model integrated with Social Compensation Theory as its primary framework. Literature consistently links personality traits to social media use. Individuals high in Neuroticism often turn to platforms as a coping mechanism for emotional distress (Althuwayb & Badawi, 2023) while low Conscientiousness is associated with addiction due to reduced self-control (Döring, 2022). Despite this significant gaps exist regarding the intersection of personality and AI-driven algorithmic burnout (Balaskas et al., 2025). This research addresses these gaps by examining the predictive power of

personality traits on addiction through a holistic approach considering demographic variables and platform preferences.

7.2. Methodology

This quantitative study employed a correlational survey model with a sample of 798 social media users in Konya reached via face-to-face data collection. Instruments included the Social Media Addiction Scale (SMAS) (Şahin & Yağcı, 2017) and the Five-Factor Personality Inventory (PI). Confirmatory Factor Analysis (CFA) confirmed the structural validity of the scales (SMAS: $x2/df = 4.087$, RMSEA = 0.044; PI: $x2/df = 3.709$, RMSEA = 0.069) with fit indices (CFI and GFI) exceeding the 0.90 threshold. Reliability was verified via Cronbach's Alpha where PI sub-dimensions (Alpha = 0.53-0.62) were methodologically justified as acceptable for short-form inventories (Gosling et al., 2003). Multicollinearity was prevented by excluding the total personality score from the regression. Regression assumptions were verified with VIF values (1.15-1.32) indicating no multicollinearity while the Durbin-Watson statistic (0.834) was justified within the cross-sectional design framework (Field, 2013).

7.3. Results

The analysis supported the main hypotheses. H1 (Demographics): Addiction levels were highest among younger age groups (15-30) and decreased significantly with age ($p < 0.05$). Education level also created a significant difference ($p < 0.05$) whereas gender was not a statistically significant variable ($p = 0.062$). H2 (Platform Preferences): Platform preference created significant differences across all five personality traits ($p < 0.05$). Notably TikTok users exhibited significantly higher Neuroticism scores than Facebook users ($p = 0.007$) while Facebook users showed higher Conscientiousness. H3 (Personality Traits): The regression model was statistically significant ($F(5, 792) = 37.642$, $p < 0.001$) and explained 19.4% ($R^2 = .194$) of the total variance. Sub-hypotheses H3a (Risk Factors) and H3b (Protective Factors) were fully supported. Neuroticism (Beta = 0.106, $p = 0.038$) and Openness to Experience (Beta = 0.119, $p = 0.023$) were positive predictors (H3a) whereas Conscientiousness (Beta = -0.301, $p < 0.001$) and Agreeableness (Beta = -0.166, $p = 0.001$) were significant negative predictors (H3b).

7.4. Discussion and Conclusion

Personality structure is a critical determinant of whether digital interaction remains healthy or becomes problematic. Neuroticism aligns with recent literature as a vulnerability factor for technostress (Ibrahim et al., 2025). The role of Openness as a risk factor is linked to algorithmic burnout (Balaskas et al., 2025) where novelty-seeking individuals become cognitively exhausted by personalized feeds. Protective roles of Conscientiousness and Agreeableness are complemented by emerging research on learnable skills such as mindfulness (Ünlü et al., 2025) and effective emotion regulation (Qiu et al., 2025). Interventions should focus on enhancing psychological resilience especially among high-risk younger populations. Future research should utilize longitudinal methods to explore the reciprocal interactions between personality and evolving forms of digital burnout.

Araştırmacıların Katkı Oran Beyanı / Contribution of Authors

Yazarların çalışmadaki katkı oranları E. Fazıl ÇÖLLÜ %70 / E. Erdal YÖRÜK %15 / M. Erhan SUMMAK %15 şeklindedir.
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Çıkar Çatışması Beyanı / Conflict of Interest

Çalışmada herhangi bir kurum veya kişi ile çıkar çatışması bulunmamaktadır.
There is no conflict of interest with any institution or person in the study.

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In this study, the rules specified within the scope of the Higher Education Institutions Scientific Research and Publication Ethics Directive were followed.

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