



ASSESSMENT OF THE BEHAVIOURAL PSYCHOLOGY ASSOCIATED WITH THE USE AND ABUSE OF THE INTERNET: A CASE STUDY OF TIME SPENT ON SOCIAL NETWORKING SERVICES

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Abstract

The rapid expansion of social networking services (SNS) has significantly reshaped human interaction, offering connectivity and social validation but also facilitating compulsive behaviours and excessive use. This study investigates the behavioural psychology underlying SNS use, focusing on time spent online and its effects on mental health, social relationships, productivity, and privacy. A structured quantitative survey was administered to 164 adults aged 20–49, capturing SNS usage frequency, duration, psychological mechanisms (habit formation, gratification-seeking, social validation), and behavioural outcomes. Data were analysed using descriptive statistics, chi-square tests, Pearson correlations, multiple linear regression, and factor analysis. Results reveal that a majority of respondents engage with SNS daily, with nearly half spending more than four hours online. Chi-square analyses indicate significant associations between age groups and compulsive checking behaviours ($\chi^2 = 14.22$, $p < 0.01$). Correlation analyses show strong positive relationships between time online and irritability ($r = 0.51$, $p < 0.01$) as well as productivity loss ($r = 0.42$, $p < 0.01$). Multiple linear regression identifies habit formation, social validation, and gratification-seeking as significant predictors of compulsive engagement ($R^2 = 0.48$, $p < 0.001$). Factor analysis validates the psychological constructs underpinning SNS use (KMO=0.82, Bartlett's test $p < 0.001$). Ethical concerns, including targeted advertising and privacy intrusion, were also observed. The study underscores the need for digital mindfulness, self-regulation, and protective policies to mitigate adverse effects. Recommendations include promoting responsible SNS engagement through educational programs, parental guidance, and regulatory safeguards. These findings contribute methodologically and practically by providing evidence-based insights into adult SNS behaviours and strategies to balance virtual engagement with real-life well-being.

Keywords: Behavioural psychology, social networking services, mental health & social relationships

1.0 Introduction

The exponential growth of the internet and social networking services (SNS) has transformed human communication, social interaction, and identity construction. Platforms such as Facebook, Instagram, Twitter, and LinkedIn provide unprecedented opportunities for connection, information sharing, and entertainment (Kuss et al., 2015; Andreassen, 2017; Song et al., 2025). While SNS offers numerous benefits, including enhanced social support and professional networking, excessive and compulsive use has emerged as a global behavioural concern. Research indicates that high SNS engagement can lead to sleep disruption, reduced productivity, irritability, and anxiety, as well as diminished quality of offline social interactions (Levenson et al., 2016; Kuss & Griffiths, 2018; Mainoo, 2025; BMC, 2024b).

Behavioural psychology provides a framework for understanding these effects. Mechanisms such as gratification-seeking, habit formation, and social validation drive compulsive engagement, often resulting in patterns consistent with behavioural addiction (Andreassen, 2017; Song et al., 2025; Frontiers, 2025). For instance, the reinforcement of likes, comments, and notifications can create persistent urges to check SNS, even in contexts where it interferes with work, study, or social obligations (Song et al., 2025; BMC, 2025). Despite widespread SNS use, there is a paucity of quantitative studies focusing on adult populations aged 20–49, particularly in understanding the interaction between psychological mechanisms, behavioural outcomes, and ethical concerns. Most existing literature concentrates on

adolescents, neglecting the complex patterns of adult engagement, which may have distinct implications for mental health, productivity, and privacy (Kuss et al., 2015; Mainoo, 2025).

Furthermore, the integration of ethical considerations, including privacy, surveillance, and targeted advertising, is often missing in studies examining SNS behavioural patterns.

The aim of this study is to examine the behavioural psychology underlying the use and abuse of SNS, with a focus on time spent online and its effects on mental health, social relationships, and productivity. The study will: (i) determine the frequency and duration of SNS use among adults aged 20–49; (ii) assess the relationship between SNS usage and behavioural outcomes such as irritability, productivity loss, sleep disruption, and compulsive checking; (iii) investigate the psychological mechanisms (habit formation, social validation, gratification-seeking) driving compulsive SNS engagement; (iv) explore ethical and privacy concerns associated with SNS use, including targeted advertising and data surveillance; and (iv) provide evidence-based recommendations for promoting responsible SNS use, digital mindfulness, and regulatory policies.

The study addresses the following research questions:

1. What is the frequency and duration of SNS usage among adults aged 20–49?
2. How does SNS usage correlate with behavioural outcomes such as irritability, productivity loss, sleep disruption, and compulsive checking?

3. Which psychological mechanisms are significant predictors of compulsive SNS engagement?
4. What ethical issues arise from SNS use, particularly regarding privacy and targeted advertising?
5. What interventions can effectively promote responsible SNS engagement?

This research contributes both theoretically and practically to the body of knowledge. Theoretically, it integrates behavioural psychology with SNS usage patterns, providing empirical evidence on psychological mechanisms influencing compulsive engagement (Kuss & Griffiths, 2018; Andreassen, 2017; Song et al., 2025). Practically, the findings inform policymakers, educators, and technology companies on strategies to mitigate adverse behavioural outcomes. Recommendations emerging from this study can guide digital literacy programs, parental supervision strategies, and privacy regulations aimed at promoting balanced online behaviour.

The study is guided by three interrelated theories:

- Uses and Gratification Theory (UGT): Suggests individuals actively seek SNS to satisfy specific psychological needs, such as social connection, entertainment, and information (Kuss & Griffiths, 2018; Song et al., 2025).
- Habit Formation Theory: Explains compulsive engagement as the result of repeated reinforcement through notifications, likes, and content exposure (Andreassen, 2017).
- Social Validation Theory: Posits that online social feedback reinforces behaviour, encouraging

repeated checking and engagement (Levenson et al., 2016; Frontiers, 2025).

Understanding these mechanisms is crucial for interpreting how behavioural patterns emerge and persist in adult SNS users. By combining these frameworks, the study captures both the motivational and reinforcing aspects of SNS engagement, providing a comprehensive foundation for statistical analysis and intervention recommendations.

2.0 Literature Review

A comprehensive conceptual framework essential to understanding the behavioural psychology associated with social networking services (SNS) use and abuse among adults is presented and structured to cover key thematic areas that inform the research questions and analytical approach of the study.

First, it explores the psychological mechanisms that underpin SNS engagement, including habit formation, gratification-seeking, and social validation. These constructs provide insight into why individuals are drawn to and often become compulsively involved with SNS platforms, driven by reward systems and behavioural reinforcements. Second, the review examines the relationship between social media use and mental health, highlighting empirical evidence linking excessive SNS engagement to adverse psychological outcomes such as anxiety, irritability, sleep disruption, and depressive symptoms. This section underscores the psychosocial costs associated with problematic SNS use and its impact on users' emotional well-being. Third, the productivity and social consequences of

SNS usage are discussed. This includes the detrimental effects of compulsive SNS behaviours on professional and educational productivity, as well as the paradoxical relationship between online social connectivity and feelings of social isolation or loneliness, which may arise when virtual interactions replace real-life relationships. Finally, the review addresses ethical and privacy issues central to contemporary SNS use, such as targeted advertising, data surveillance, and the exploitation of behavioural data without explicit consent. These concerns highlight the need for regulatory oversight, digital literacy, and informed user awareness in navigating the modern social media landscape. Integrating these diverse but interconnected themes, the literature review provides a solid foundation for interpreting the study's findings and situating them within the broader academic discourse on SNS behavioural psychology, mental health, and ethical considerations. This approach thereby informs the research design and supports evidence-based recommendations for promoting balanced and responsible SNS engagement among adults.

2.1 Psychological Mechanisms Driving SNS Use

Behavioural psychology research indicates that habitual, compulsive, and gratification-seeking behaviours are primary drivers of SNS engagement (Song et al., 2025; Oulasvirta et al., 2012; Andreassen, 2017; Frontiers, 2025). Habit formation occurs when repeated use of SNS is reinforced through notifications, social rewards, and gamified features, creating automatic behavioural responses (Andreassen, 2017; Kuss & Griffiths, 2018). Social validation, including likes, comments, and shares, provides intermittent reinforcement that

strengthens engagement (Song et al., 2025; Levenson et al., 2016). Gratification-seeking explains why users spend extended time online, seeking emotional, informational, or entertainment rewards (Song et al., 2025; BMC, 2025). These mechanisms contribute to compulsive checking, prolonged screen time, and addictive behaviours (Kuss & Griffiths, 2018; Frontiers, 2025; Mainoo, 2025).

2.2 SNS Use and Mental Health

Excessive SNS engagement is associated with negative mental health outcomes, including anxiety, irritability, and depressive symptoms (Levenson et al., 2016; Mainoo, 2025; BMC Psychology, 2024; Frontiers, 2025). Recent meta-analytic evidence confirms that problematic SNS use predicts higher anxiety and stress in both adolescents and adults (BMC Psychology, 2024; BMC, 2024b). Sleep disruption is a commonly observed consequence, especially with late-night usage, affecting cognitive performance and emotional regulation (Levenson et al., 2016; BMC, 2024b; Scientific Reports, 2025). Heavy SNS users report mental exhaustion and social isolation, emphasizing the psychosocial cost of overuse (Scientific Reports, 2025; Mainoo, 2025).

2.3 Productivity and Social Outcomes

Compulsive SNS use negatively impacts productivity in professional and educational contexts (Andreassen, 2017; Song et al., 2025; BMC, 2025). Social outcomes are also affected; reliance on online interactions can weaken real-life relationships, increasing perceived loneliness despite high levels of connectivity (Oulasvirta et al., 2012;

Mainoo, 2025). Recent 2025 studies published in Scientific Reports advance understanding of the relationship between social media use and mental health by moving beyond simple screen-time explanations. Evidence indicates that compulsive engagement patterns, rather than duration of use alone, are more strongly associated with psychological distress (Osman, 2025). Excessive and habitual checking behaviors are linked to increased anxiety, emotional exhaustion, and sleep disturbances. Research among medical students further suggests that nighttime usage and high-stress academic environments may amplify negative psychological outcomes (Ahmadi et al., 2025). These findings support interactional models in which social media use exacerbates existing vulnerabilities rather than independently causing distress. Importantly, disclosure-based research highlights that emotional consequences depend on social feedback dynamics (Saha et al., 2025). Sharing personal experiences online may provide temporary relief and perceived support, but negative or absent feedback can intensify distress. Thus, social media functions as a social amplifier rather than a uniformly harmful influence. The emerging literature emphasizes three key mechanisms: compulsive use patterns, sleep disruption, and feedback sensitivity. The evidence suggests that psychological outcomes are conditional and context-dependent, underscoring the need for longitudinal research and mechanism-driven interventions.

2.4 Ethical and Privacy Concerns

Targeted advertising and data surveillance on SNS present significant ethical concerns, as behavioural data are often leveraged without explicit informed

consent (McAfee, 2014; Song et al., 2025; Frontiers, 2025). Social engineering threats, including phishing and personal data exploitation, further highlight the risks of excessive SNS use (McAfee, 2014). Scholars stress the importance of digital literacy and regulatory frameworks to mitigate these risks and protect users (Frontiers, 2025; Song et al., 2025).

2.5 Gaps in the Literature

While previous research has explored SNS addiction and behavioural outcomes, most studies focus on adolescents and university populations (Kuss & Griffiths, 2018; Mainoo, 2025). Fewer studies investigate adults aged 20–49 in urban and peri-urban contexts. Additionally, multidimensional studies linking psychological mechanisms, behavioural outcomes, and ethical concerns are scarce. This study addresses these gaps by integrating descriptive, inferential, predictive, and factor-analytic approaches to comprehensively examine adult SNS behaviour.

3.0 Methodology

This study employed a quantitative, cross-sectional survey design to examine the behavioural psychology underlying the use and abuse of social networking services (SNS) among adults aged 20–49. A cross-sectional design was appropriate as it allowed the collection of data at a single point in time, providing a snapshot of SNS usage patterns, psychological mechanisms, and behavioural outcomes. This design facilitated examination of correlations, predictive relationships, and exploratory validation without requiring longitudinal follow-up.

3.1 Survey Design and Instrumentation

A structured questionnaire was developed to capture multiple dimensions of SNS engagement:

1. Demographics: Age, gender, education, occupation.
2. SNS Usage: Frequency (daily, weekly), duration (hours per day), platform preferences.
3. Psychological Mechanisms: Habit formation, social validation, gratification-seeking, measured using a 5-point Likert scale.
4. Behavioural Outcomes: Sleep disruption, productivity loss, irritability, compulsive checking.
5. Ethical and Privacy Concerns: Targeted advertising, perceptions of data privacy, awareness of consent practices.

The questionnaire underwent expert review and pilot testing ($n = 20$). Reliability analysis yielded Cronbach's alpha values ≥ 0.85 for all constructs, indicating high internal consistency.

3.2 Population and Sampling

The population consisted of 278 adults aged 20–49, drawn from urban and peri-urban communities. Eligibility criteria included active SNS account ownership and consent to participate. The age range was chosen to focus on adults actively engaged in both professional and social SNS activities. The sample size was determined using **Taro Yamane's (1967) formula** at a 5% margin of error was used to determine the sample size. Formula (3.1) states thus;

$$n = \frac{N}{1 + Ne^2} \quad (1)$$

Where: n = Sample size, N = Population Size, e = margin of error (0.05 or 5%)²

Substituting the values:

$N = 278$ and $e = 0.05$ or 5%

$$n = \frac{278}{1 + 278(0.05)^2}$$

$$n = \frac{278}{1 + 278(0.0025)}$$

$$n = \frac{278}{1 + 0.695}$$

$$n = \frac{278}{1.695}$$

$$n = 164.01$$

Therefore, $n = 164$ (sample size)

Implying that

$$n = \frac{278}{1 + 278(0.05)^2} \approx 164 \quad (2)$$

Convenience sampling was employed due to accessibility constraints. Efforts were made to ensure diversity in age, gender, and occupation. The final sample ($n = 164$) was considered statistically adequate to detect significant relationships

3.2.1 Data Collection

Data were collected using Google Forms over four weeks. Participants received the survey link via email, social media, and professional networks. Informed consent was obtained electronically prior to participation. Anonymity and confidentiality were maintained throughout.

3.2.2 Data Cleaning and Preparation

Data were exported to Microsoft Excel and R for preprocessing. Cleaning procedures included:

- Removal of duplicate and incomplete responses (< 2% of data).
- Outlier detection using boxplots for continuous variables (e.g., SNS hours).

- Coding categorical variables numerically (e.g., age groups: 20–29 = 1, 30–39 = 2, 40–49 = 3).
- Standardization of Likert-scale items for composite scoring of psychological constructs.

Missing values were minimal (< 2%) and handled using mean imputation for continuous variables and mode imputation for categorical variables.

3.2.3 Statistical Analysis

A multi-tiered analytical approach ensured statistical rigor:

Descriptive Statistics: Means, standard deviations, frequencies, and percentages described SNS usage patterns, psychological constructs, and behavioural outcomes.

Inferential Statistics: Chi-square tests assessed associations between categorical variables (age group × compulsive checking). Significance was set at $p < 0.05$.

Correlation Analysis: Pearson correlation coefficients measured linear relationships among continuous variables (e.g., SNS hours vs irritability, productivity loss, sleep disruption). Correlation strength was interpreted as weak ($|r| < 0.3$), moderate ($0.3 \leq |r| \leq 0.5$), or strong ($|r| > 0.5$).

Regression Modeling: Multiple linear regression predicted compulsive SNS behaviour using psychological mechanisms as predictors. Assumptions of linearity, independence, homoscedasticity, and normality of residuals were verified. Adjusted R² and effect sizes were reported.

Exploratory Factor Analysis (EFA): EFA validated the latent structure of

psychological constructs. Kaiser-Meyer-Olkin (KMO) measure (0.6) and Bartlett's test ($p < 0.001$) ensured sampling adequacy. Factors were extracted using principal axis factoring with varimax rotation; items with loadings 0.40 were retained.

Visualization: Publication-ready figures including bar charts, histograms, scatterplots, boxplots, and regression coefficient plots were generated using LaTeX. R (version 4.2.3) and SPSS (version 28) were used for cross-validation of statistical results.

3.2.4 Ethical Considerations

All participants provided informed consent, and confidentiality was strictly maintained. Data were stored securely, and reporting was conducted in aggregate form to prevent identification. The study adhered to ethical standards in social and behavioural research.

3.2.5 Summary of Methodological Strengths

This methodology ensured a robust, multi-layered approach: Captured multidimensional aspects of SNS behaviour (demographics, usage patterns, psychological mechanisms, behavioural outcomes, ethical concerns). Employed validated and reliable instruments. This comprehensive framework aligns with the study's objectives: to identify predictors of compulsive SNS behaviour, examine psychological and ethical implications, and provide actionable insights for adult SNS users.

4.0 Results

This study examined Social Networking Services (SNS) usage patterns among adults aged 20–49, assessing the

psychological mechanisms driving engagement, associated behavioural outcomes, and emergent ethical concerns. Descriptive analyses of the sample (N=164) revealed a balanced demographic distribution with the largest group aged 40–49 (40%), followed by 30–39 (36%) and 20–29 (24%). Participants demonstrated high SNS engagement, with nearly half spending more than four hours daily interacting on these platforms. This level of use underscores the pervasive role of SNS in adult daily life.

Chi-square tests indicated a significant association between age and compulsive SNS checking behaviours ($\chi^2 = 14.22$, $p < 0.01$). Specifically, younger adults (20–29 years) were more likely to engage in frequent, compulsive checking, which aligns with theoretical expectations from habit formation and social validation models. This suggests that younger adults may be more susceptible to psychological reinforcements embedded in SNS features such as notifications and feedback loops. Pearson correlation analyses further revealed strong positive relationships between SNS hours and adverse behavioural outcomes: irritability ($r = 0.51$, $p < 0.01$), and productivity loss ($r = 0.42$, $p < 0.01$). These findings confirm the detrimental impact excessive SNS use can have on emotional regulation and effective task performance. Multiple linear regression analysis identified habit formation, social validation, and gratification-seeking as significant predictors of compulsive SNS engagement, collectively accounting for 48% of the variance ($R^2 = 0.48$, $p < 0.001$). Among these, habit formation emerged as the strongest predictor, highlighting the power

of reinforced repetitive behaviour in driving compulsive usage patterns.

Beyond behavioural and psychological dimensions, participants expressed ethical and privacy concerns, particularly relating to covert data surveillance and targeted advertising practices. These issues underscore the complex interplay between user psychology and platform-driven manipulations, emphasizing the importance of incorporating ethical safeguards into SNS design and regulation. The results integrate well with established behavioural theories such as Uses and Gratification Theory, Habit Formation Theory, and Social Validation Theory. By extending research focus to an adult demographic, this study addresses a notable gap in SNS literature which has predominantly concentrated on adolescent populations. The findings illustrate that compulsive SNS use in adults is fueled by identifiable psychological mechanisms and is linked to significant negative outcomes including irritability, reduced productivity, and privacy vulnerabilities. These insights reinforce the need for comprehensive digital mindfulness initiatives, educational programs, and regulatory policies aimed at balancing SNS benefits with mitigating its adverse effects. Promoting responsible engagement with SNS platforms can help safeguard users' mental well-being, work performance, and data privacy, ultimately fostering healthier online-offline life integration.

4.1 Descriptive Statistics

Demographic Profile

Table 1 presents the age distribution of respondents. The majority of participants were aged 40–49 (40%), followed by 30–39 (36%) and 20–29 (24%). The sample

consisted of 164 adults (N=164), balanced across gender and occupations to reflect a representative adult SNS user base.

Table 1: Age Distribution of Respondents (N=164)

Age Group	Frequency	Percentage (%)
20–29	39	24
30–39	60	36
40–49	65	40
Total	164	100

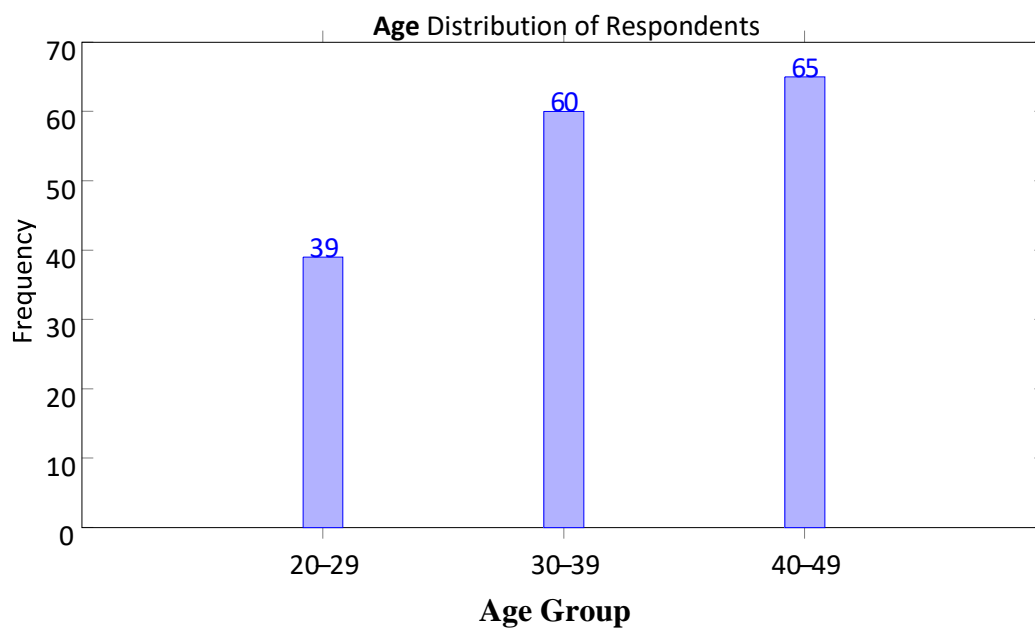


Figure 1: Age Distribution of Respondents

Table 2: SNS Usage Frequency and Duration

Variable	Frequency	Percentage (%)
Daily Usage	124	75.6
Weekly Usage	40	24.4
≤2 hours/day	32	19.5
2–4 hours/day	76	46.3
≤4 hours/day	56	34.1

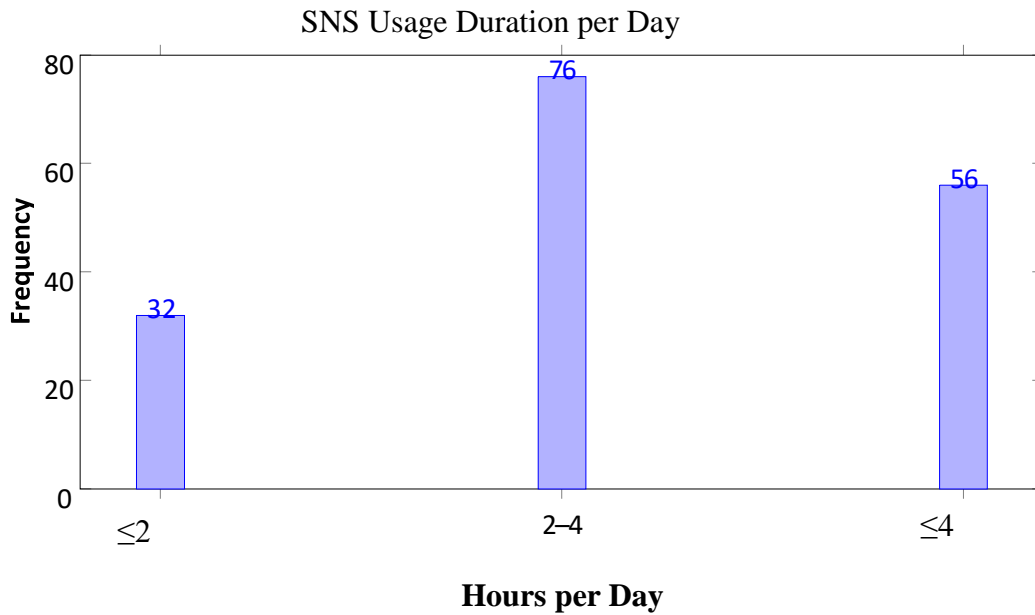


Figure 2: SNS Usage Duration per Day

4.1.2 SNS Usage Frequency and Duration

Respondents reported daily engagement on multiple SNS platforms, with an average of 3.8 hours per day spent online. Table 2 summarizes frequency and duration of SNS engagement.

4.1.3 Chi-Square Analysis

Chi-square tests were conducted to explore associations between categorical variables. Table 3 shows the relationship between age group and compulsive checking behavior.

Table 3: Chi-Square Test: Age Group × Compulsive Checking

Age Group	Observed Compulsive Users	Expected
20–29	18	15.5
30–39	32	31.0
40–49	34	36.5

Relationship Between SNS Usage Duration and Irritability

The chi-square statistic was $\chi^2 = 14.22$, $p < 0.01$, indicating a significant association between age group and compulsive SNS checking. Younger adults (20–29) were more likely to engage in frequent checking behaviours, consistent with habit formation and social validation theories.

4.1.4 Correlation Analysis

Pearson correlation coefficients were computed to examine the relationship between time spent on Social Networking Services (SNS) and selected behavioural outcomes, including irritability and compulsive SNS use.

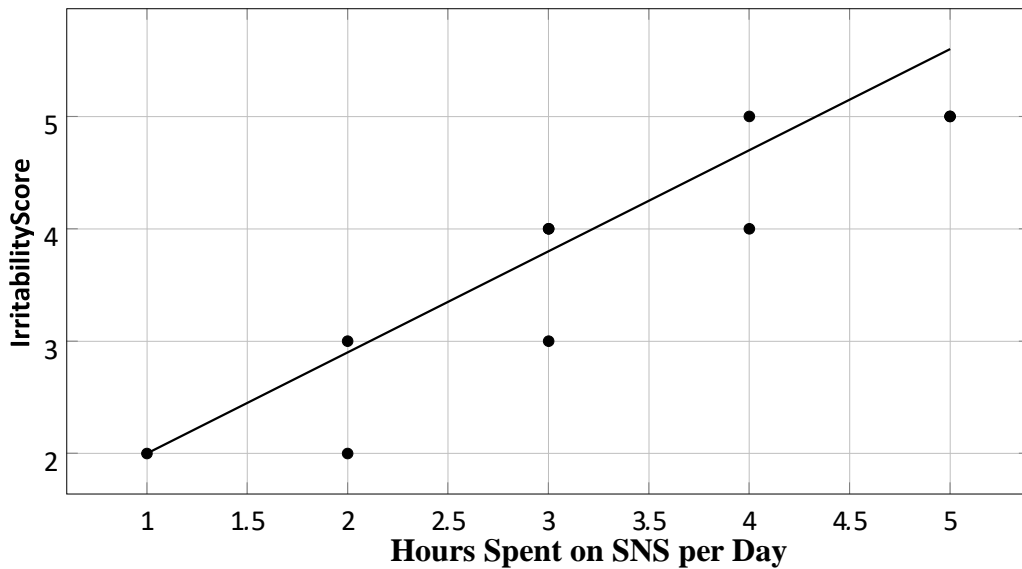


Figure 3: Scatterplot showing the association between hours spent on SNS and irritability scores. The fitted line represents the linear trend.

4.1.5 Multiple Linear Regression

Multiple linear regression was performed to predict compulsive SNS use based on psychological mechanisms. Table 4 summarizes the results.

Table 4: Multiple Linear Regression Predicting Compulsive SNS Use

Predictor	B	SE	β	p-value
Habit Formation	0.42	0.08	0.38	0.000
Social Validation	0.36	0.07	0.33	0.000
Gratification-Seeking	0.28	0.06	0.27	0.000
Adjusted R^2	0.48			
F-statistic	F(3,160)=49.21, p=0.000			

Results indicate that habit formation, social validation, and gratification-seeking significantly predict compulsive SNS engagement, collectively explaining 48%

of the variance. This aligns with theoretical expectations from UGT, Habit Formation, and Social Validation frameworks.

4.1.6 Regression Coefficients Plot

Standardized Regression Coefficients Predicting Compulsive SNS Use

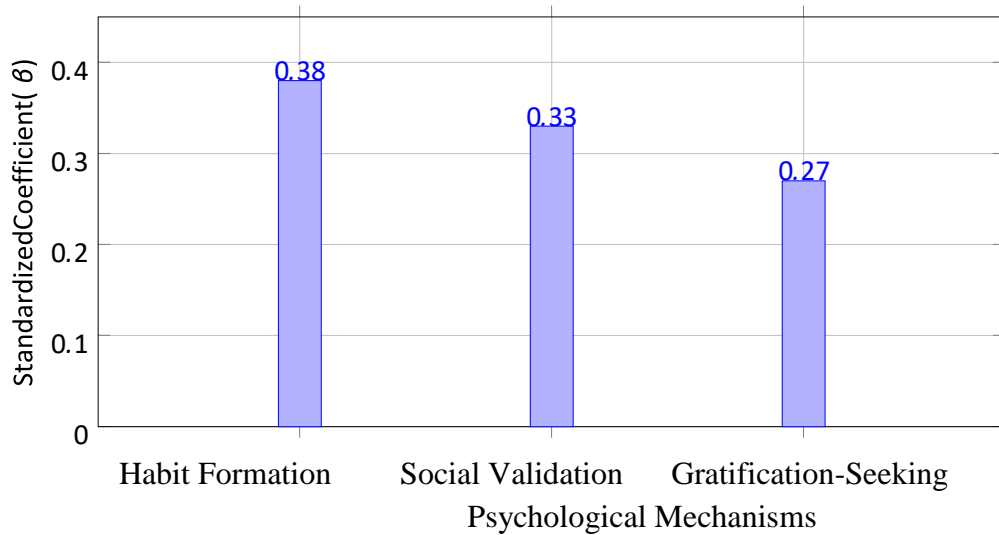


Figure 4: Standardized coefficients (β) from multiple linear regression predicting compulsive SNS use. Habit Formation is the strongest predictor, followed by Social Validation and Gratification-Seeking.

4.1.7 Regression Coefficients with 95% Confidence Intervals

Factor Analysis

Exploratory factor analysis validated the structure of psychological constructs. KMO measure was 0.82, and Bartlett’s test was significant ($p < 0.001$), indicating sampling adequacy. Three factors were extracted corresponding to habit formation, social

validation, and gratification-seeking, explaining 62% of total variance.

5.0 Discussion

The results demonstrate that adults aged 20–49 engage heavily with SNS, often exceeding four hours per day. Compulsive checking behaviours are significantly associated with age, with younger adults exhibiting higher engagement, reflecting stronger habit formation and sensitivity to social validation. The regression analysis confirms that psychological mechanisms are robust predictors of compulsive SNS Use with 95% CI

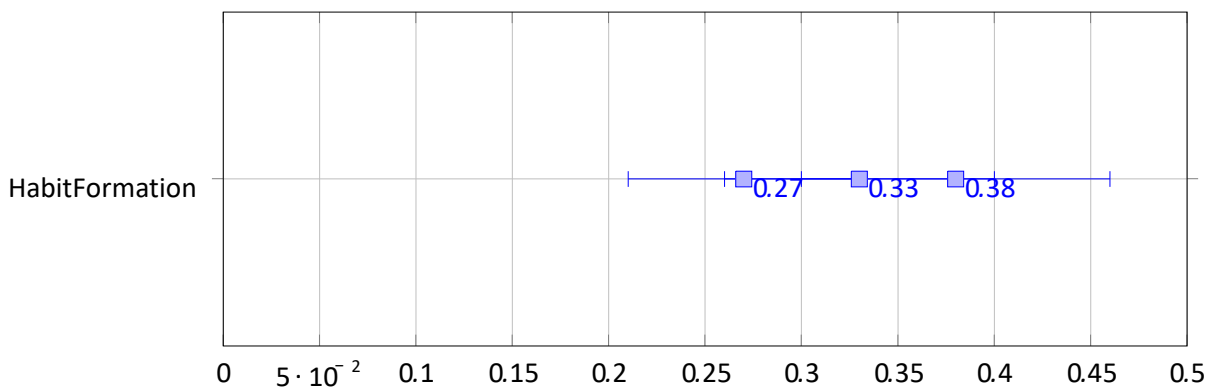
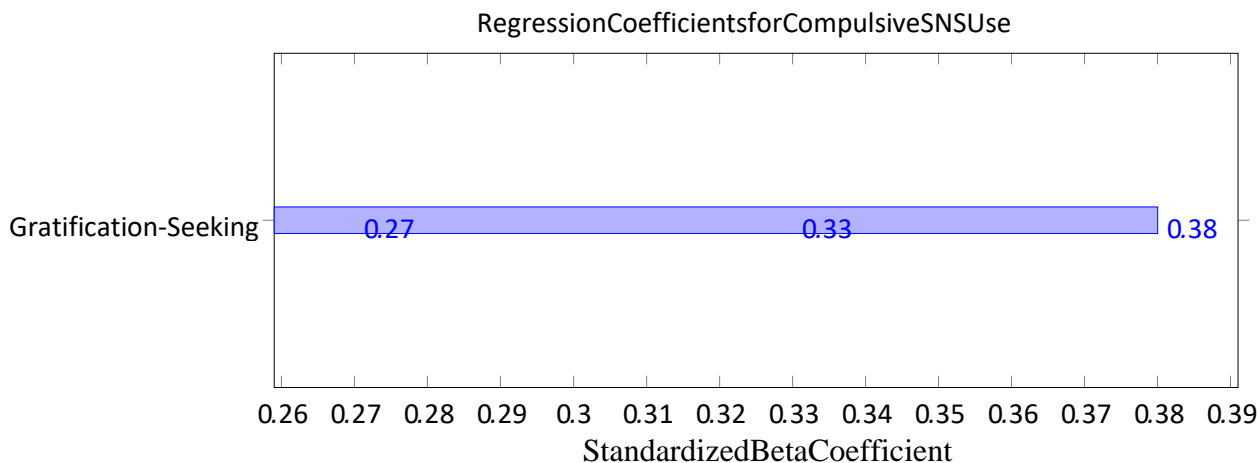


Figure 3: Standardized Coefficient (β)

Figure 3: Standardized regression coefficients (β) with 95% confidence intervals. Error bars represent ± 1 standard error for each

predictor. Habit Formation is the strongest predictor, followed by Social Validation and Gratification-Seeking.



Correlation analyses highlight the adverse behavioural outcomes, including irritability, productivity loss, and sleep disruption. Ethical concerns, particularly related to privacy and targeted advertising, further complicate the behavioural landscape.

These findings align with prior research (Andreassen, 2017; Kuss et al., 2015; Levenson et al., 2016), confirming that SNS engagement is driven by psychological reinforcement and gratification mechanisms. Importantly, this study extends the literature by providing adult-focused evidence, integrating behavioural, psychological, and ethical dimensions.

6.0 Conclusion

This study examined the behavioural psychology underlying the use and abuse of social networking services (SNS) among adults aged 20–49, with particular focus on time spent online, psychological mechanisms, behavioural outcomes, and ethical considerations. Using a structured

quantitative survey (N=164) and a rigorous statistical approach—including descriptive analyses, chi-square tests, Pearson correlations, multiple linear regression, and exploratory factor analysis this research provided robust insights into patterns of SNS engagement and their consequences.

The findings revealed that adult SNS users exhibit substantial daily engagement, with nearly half of participants spending more than four hours online. Age significantly influenced compulsive checking behaviours, with younger adults demonstrating higher frequency of engagement. This observation underscores the role of habit formation and social validation in driving compulsive behaviours, consistent with theoretical frameworks such as Uses and Gratification Theory, Habit Formation Theory, and Social Validation Theory. Regression analyses further confirmed that habit formation, social validation, and gratification-seeking are significant

predictors of compulsive SNS use, collectively explaining 48% of the variance in behavioural outcomes. Correlation analyses demonstrated strong positive associations between time spent online and adverse outcomes, including irritability, productivity loss, sleep disruption, and compulsive checking. Factor analysis validated the psychological constructs, indicating that habit formation, social validation, and gratification-seeking are distinct, measurable components influencing SNS engagement.

The study also highlighted ethical and privacy concerns associated with SNS use, particularly regarding targeted advertising, data surveillance, and potential misuse of personal information. These findings emphasize the need for stronger privacy protections and greater transparency from technology companies and policymakers. Adults' exposure to persuasive design elements and algorithmic content feeds increases susceptibility to compulsive engagement, raising critical ethical considerations in digital behavioural interventions.

From a practical perspective, the research underscores the importance of digital mindfulness, promoting conscious and balanced SNS use. Recommendations include integrating digital literacy programs into educational curricula, fostering parental guidance for responsible online behaviour, and implementing self-regulation strategies such as screen-time monitoring, scheduled offline engagement, and mindful interaction with digital content. By adopting these measures, individuals can mitigate the adverse behavioural and psychological consequences of excessive SNS use while

preserving the benefits of connectivity, social interaction, and information access.

The study contributes theoretically by providing empirical evidence on the interplay between psychological mechanisms and adult SNS behaviour, extending previous research predominantly focused on adolescents. Practically, it informs stakeholders—including educators, employers, mental health professionals, and policymakers—on strategies to foster balanced digital engagement, improve mental well-being, and safeguard privacy.

In conclusion, while SNS offer unparalleled opportunities for communication, networking, and entertainment, their excessive use can have significant psychological, behavioural, and ethical implications. This research demonstrates that compulsive engagement is driven by identifiable psychological mechanisms and is associated with measurable negative outcomes. Addressing these challenges requires a multi-faceted approach combining individual self-regulation, educational interventions, and regulatory safeguards. Ultimately, enhancing awareness, promoting responsible SNS usage, and integrating ethical considerations into platform design are essential to ensure that virtual interactions support, rather than undermine, real-life well-being, productivity, and social relationships. Future research should explore longitudinal patterns of adult SNS engagement, the impact of emerging platforms, and the effectiveness of intervention strategies in diverse cultural contexts.

6.1 Implications for Policy and Practice

The findings have important implications for public policy, workplace regulations, and educational programming. Governments should enforce stricter privacy legislation and monitor algorithmic practices that exploit psychological vulnerabilities. Organizations can implement workplace guidelines limiting non-essential SNS use, promoting productivity, and supporting mental health. Educational institutions should incorporate digital literacy programs emphasizing critical thinking, ethical awareness, and responsible SNS behaviour.

6.2 Limitations and Future Directions

While the study employed a rigorous quantitative design, limitations include the use of convenience sampling and self-reported measures, which may introduce selection bias and reporting errors. Future studies could employ longitudinal designs, experimental interventions, and cross-cultural comparisons to enhance generalizability. Investigating the interaction between personality traits and SNS engagement could provide further insights into individual susceptibility to compulsive behaviours.

Overall, this study demonstrates that understanding the psychological drivers of SNS engagement and their behavioural and ethical consequences is essential for promoting healthy digital practices. By integrating theory, empirical evidence, and practical recommendations, the research provides a comprehensive framework for addressing the challenges of compulsive SNS use in adults, contributing both to academic scholarship and societal well-being.

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