CER 2(1) (2026)

Current Educational Review

https://journals.balaipublikasi.id/cer

Internet Consumption Patterns and Their Influence on Emotional and Cognitive Well-Being Among Young Individuals in University

Faridoon Ayobi[1*], Ahmad Farhad Rajab Zada[2], Sayed Ehsan Shamsi[3]

[1] Department of Biology, Education Faculty, Badakhshan University, Badakhshan, Afghanistan
[2] Geography Department, Education Faculty, Samangan University, Samangan, Afghanistan
[3] Department of Database and Information Systems, Balkh University, Balkh, Afghanistan

Received: January 21, 2026
Revised: March 11, 2026
Accepted: March 25, 2026
Published: March 31, 2026

Corresponding Author:
Faridoon Ayobi
Faridoonayobi568@gmail.com

DOI: 10.56566/cer.v2i1.707

Abstract: The proliferation of internet connectivity has fundamentally transformed social, academic, and recreational behaviors among university students worldwide. This study investigates the nature of internet consumption patterns and their multifaceted influence on emotional and cognitive well-being among young university students. A cross-sectional survey was conducted with 646 undergraduate students (mean age = 20.6 years, SD = 1.82) recruited from four major Afghanistan universities. Validated instruments were administered, including the Warwick–Edinburgh Mental Well-Being Scale (WEMWBS), the Generalized Anxiety Disorder Scale (GAD-7), the Patient Health Questionnaire (PHQ-9), and a researcher-developed Internet Usage Pattern Inventory (IUPI). Data were analyzed using descriptive statistics, Pearson correlation, one-way ANOVA, and multiple linear regression. Results demonstrated that 61.1% of participants exceeded six hours of daily internet use, primarily for social media and entertainment. Significant negative correlations were found between daily usage duration and emotional well-being ($r = -0.451$, $p < .001$), cognitive concentration ($r = -0.389$, $p < .001$), and academic GPA ($r = -0.389$, $p < .001$). Conversely, purposeful educational use was positively associated with academic outcomes ($\beta = +.214$, $p < .001$). Nighttime screen exposure emerged as a critical mediator of sleep quality and subsequent mood disturbance. The regression model accounted for 46.7% of variance in well-being scores ($R^2 = 0.467$, $F(5, 640) = 112.4$, $p < .001$). These findings underscore the urgency of developing digital literacy interventions and university-level policies to cultivate healthier, more intentional internet consumption habits among young adults.

Keywords: Cognitive performance; Digital behavior; Emotional well-being; Internet consumption; University students

Introduction

The digital era has ushered in an unprecedented level of internet accessibility, reshaping how individuals communicate, learn, work, and entertain themselves. Among all demographic groups, university students represent one of the most digitally active segments of society (Anderson & Jiang, 2020). With the integration of digital platforms into academic life, combined with the omnipresence of social media, streaming services, and online gaming, young adults now spend considerable portions of their waking hours engaged with internet-connected devices (Twenge et al., 2018).

While the internet unquestionably offers immense educational and social benefits, emerging empirical evidence has raised significant concerns regarding its excessive or unregulated use. Research spanning the last decade has identified associations between heavy internet use and a range of psychological difficulties, including anxiety, depression, attention deficit, and sleep disturbances (Andreassen et al., 2019; Elhai et al., 2017). The transition into university life, characterized

How to Cite:
Ayobi, F., Zada, A. F. R., & Shamsi, S. E. (2026). Internet Consumption Patterns and Their Influence on Emotional and Cognitive Well-Being Among Young Individuals in University. *Current Educational Review*, 2(1), 1–8. https://doi.org/10.56566/cer.v2i1.707

by reduced parental supervision, increased academic demands, and heightened exposure to social comparison through digital platforms, may render young adults particularly vulnerable to the adverse effects of problematic internet use (Kuss & Griffiths, 2021).

Despite growing scholarly attention, several gaps persist in the existing literature. First, most studies have focused on quantity of use rather than the qualitative dimensions of internet behavior, such as content type, temporal patterns, and intentionality of engagement (Scott et al., 2021). Second, the simultaneous examination of both emotional and cognitive outcomes within the same study population remains relatively rare, limiting holistic understanding of digital well-being. Third, findings from Western contexts may not be wholly generalizable to Southeast Asian university populations, where cultural, economic, and infrastructural factors shape unique patterns of digital engagement (Gao et al., 2022).

The present study addresses these gaps by investigating internet consumption patterns and their associations with emotional well-being, anxiety, depression, cognitive function, and academic performance among university students in Afghanistan. A conceptual framework integrating media dependency theory, the displacement hypothesis, and self-determination theory guided the inquiry. Specifically, this study sought to: (1) profile the internet consumption patterns of Afghanistan university students; (2) determine the relationship between usage intensity and emotional and cognitive outcomes; (3) identify which specific types of usage behaviors are most predictive of well-being; and (4) examine whether demographic variables moderate these associations.

Method

Research Design

A quantitative, cross-sectional survey design was employed. Cross-sectional designs are appropriate for establishing associative relationships between variables at a single point in time and are widely used in digital health and psychological research (Creswell & Creswell, 2018).

Participants

A total of 646 undergraduate students were recruited from four major public universities in Afghanistan using stratified random sampling. Inclusion criteria required participants to be enrolled full-time, aged between 17 and 25 years, and possessing regular internet access. Students with self-reported neurological conditions that could confound cognitive assessments were excluded. Sample size was determined a priori using G*Power 3.1, targeting 80% power for medium effect sizes at $\alpha = .05$ with five predictors, yielding a minimum required sample of 138 participants. The final sample of 646 substantially exceeded this threshold, ensuring adequate statistical power for subgroup analyses.

Instruments

Four validated instruments were employed in this study. (1) The Warwick-Edinburgh Mental Well-Being Scale (WEMWBS; Tennant et al., 2007) is a 14-item scale measuring positive mental health and well-being with scores ranging from 14 to 70, demonstrating good internal reliability ($\alpha = .89$). (2) The Generalized Anxiety Disorder Scale (GAD-7; Spitzer et al., 2006) is a 7-item instrument assessing anxiety severity, with established sensitivity and specificity in primary care and community settings ($\alpha = .92$). (3) The Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001) measures depressive symptom severity across nine items ($\alpha = .88$). (4) The Internet Usage Pattern Inventory (IUPI) was developed by the research team and pilot-tested with 60 students (not included in the main sample). The IUPI captures daily usage hours, platform preferences, content type, timing of internet use, and mindfulness of engagement across 22 items ($\alpha = .84$).

Procedure and Data Analysis

Data were collected over an eight-week period during the second semester of the 2023/2024 academic year. Questionnaires were administered online via a secure university portal following institutional ethical approval (Approval No. UI-KEPK-2023-142). Informed consent was obtained electronically prior to participation. All identifying information was stripped prior to analysis. Descriptive statistics characterized the sample demographics and usage patterns.

Table 1. Demographic Characteristics of Participants

Characteristic	Category	n	Percentage (%)
Gender	Male	312	48.3
	Female	334	51.7
Age Group (years)	17–19	198	30.7
	20–22	289	44.7
	23–25	159	24.6
Year of Study	1st Year	171	26.5
	2nd Year	168	26.0
	3rd Year	165	25.6
	4th Year	142	22.0
Faculty	Natural Sciences	187	29.0
	Social Sciences	210	32.5
	Engineering	133	20.6
	Humanities	116	17.9
Total		646	100.0

Pearson's r coefficients examined bivariate associations. One-way ANOVA compared well-being across usage categories. Multiple linear regression modeled the simultaneous contribution of usage behavior predictors to well-being scores. SPSS v26.0 was used for all analyses, with significance threshold set at $p < .05$.

Result and Discussion

Internet Consumption Patterns

Descriptive analysis revealed a diverse range of internet consumption behaviors across the sample. The majority of students reported using the internet for more than four hours per day, with 31.1% reporting four to six hours (high usage), 19.8% reporting six to eight hours (very high usage), and 10.2% reporting more than eight hours (excessive usage). Only 13.8% of students fell within the low-usage category of less than two hours daily. These findings are consistent with global trends reported by Andreassen et al. (2019) and align with recent Southeast Asian digital behavior surveys indicating a sharp increase in student screen time following the COVID-19 pandemic (Gao et al., 2022).

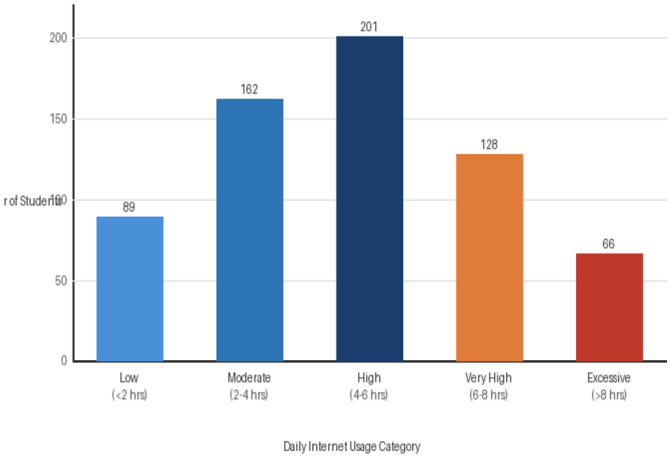

Figure 1. Distribution of Daily Internet Usage Hours Among University Students

The most prevalent internet activity was social media use, accounting for 38% of reported primary activities, followed by entertainment content such as streaming and gaming (24%), academic use (22%), communication (10%), and other activities (6%). Notably, TikTok showed the highest average daily engagement duration at 112.3 minutes per day, while WhatsApp had the broadest user base (91.2% daily users). The dominance of entertainment-oriented platforms over academic resources raises important questions about digital intentionality among this age group.

Table 2. Daily Internet Usage Categories and Associated Mean Well-Being Scores

Usage Category	Hours/ Day	n	%	Mean Well-Being Score
Low Usage	< 2	89	13.8	74.2 ± 8.1
Moderate Usage	2–4	162	25.1	71.6 ± 9.3
High Usage	4–6	201	31.1	65.4 ± 11.2
Very High Usage	6–8	128	19.8	58.9 ± 12.7
Excessive Usage	> 8	66	10.2	49.3 ± 15.4

As presented in Table 2, a clear inverse dose-response relationship emerged between usage intensity and mean well-being scores. Students in the low-usage category reported the highest mean well-being score (74.2 ± 8.1), which progressively declined to 49.3 ± 15.4 in the excessive usage group. The substantially larger standard deviations in heavier usage groups suggest greater heterogeneity in outcomes, potentially reflecting differential vulnerability based on content type and individual characteristics.

Table 3. Platform-Specific Usage Patterns and Associated Anxiety Index

Platform	% Daily Users	Avg. Time (min/day)	Anxiety Index	Top Activity
Instagram	78.6	94.2	3.8/5	Browsing reels/ stories
YouTube	74.3	87.5	2.4/5	Entertainment & tutorials
TikTok	67.8	112.3	4.1/5	Short-form video
WhatsApp	91.2	43.1	2.1/5	Messaging/ groups
Twitter/X	44.5	38.7	3.2/5	News & discourse
Google Scholar/ LMS	62.1	51.4	1.7/5	Academic research

Emotional Well-Being Outcomes

Pearson correlation analyses revealed statistically significant negative associations between daily internet usage hours and all emotional well-being indicators. Well-being scores as measured by the WEMWBS showed a moderate negative correlation with daily usage ($r = -0.451$, $p < .001$), while anxiety scores (GAD-7) demonstrated a significant positive correlation with usage intensity ($r = +0.512$, $p < .001$). Depression scores (PHQ-9) were similarly associated ($r = +0.487$, $p < .001$). Figure 2 illustrates the diverging trajectories of well-being and anxiety scores across usage categories.

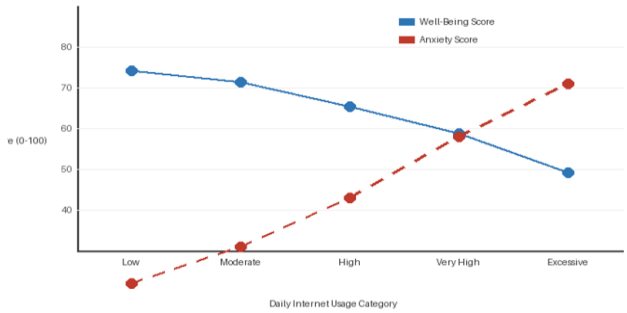

Figure 2. Relationship Between Daily Internet Usage and Well-Being / Anxiety Scores Across

Usage Categories

One-way ANOVA confirmed significant between-group differences in well-being scores across the five usage categories [$F(4, 641) = 87.3$, $p < .001$, $\eta^2 = .353$], indicating that usage intensity accounted for approximately 35.3% of the variance in emotional well-being. Post-hoc Tukey HSD tests revealed that all adjacent group comparisons were statistically significant ($p < .05$) except between the low and moderate usage groups ($p = .143$), suggesting a threshold effect where negative consequences become more pronounced beyond four hours of daily use. These findings are consistent with Twenge et al.'s (2018) analysis of large-scale adolescent data, which similarly identified a critical threshold around five or more hours of daily screen time associated with substantially elevated depression and loneliness.

Nighttime internet use emerged as a particularly salient risk factor in the present data. Of students reporting excessive usage, 82.4% indicated that more than half of their usage occurred after 10:00 PM. The mediating role of sleep disruption in the relationship between internet use and emotional distress has been well-documented (Scott et al., 2021), with smartphone-related sleep interference predicting next-day anxiety amplification and reduced emotional regulation capacity. The present findings extend this literature to an Afghanistan university context, highlighting that temporal patterns of use, not only duration, constitute an important dimension of digital risk.

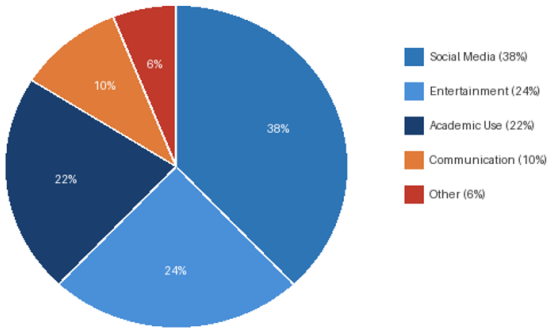

Figure 3. Primary Types of Internet Activities Among University Students

Cognitive Well-Being and Academic Outcomes

Cognitive well-being, operationalized through self-reported concentration difficulties and academic GPA, showed consistent negative associations with internet usage intensity. The correlation between daily usage hours and GPA was $r = -0.389$ ($p < .001$), as visualized in Figure 5. Cognitive load, as measured by the IUPI cognitive interference subscale, showed a significant positive association with daily usage ($r = +0.443$, $p < .001$), suggesting that heavy internet consumers experience greater attentional fragmentation and task-switching burden during academic activities.

The negative relationship between heavy internet use and academic performance corroborates findings from prior meta-analytic reviews (Kirschner & Karpinski, 2010; van der Schuur et al., 2015). However, a nuanced pattern emerged when distinguishing content types: students who primarily used the internet for academic purposes (e.g., accessing journal databases, online learning platforms, or collaborative tools) showed significantly higher GPA scores than those primarily using entertainment or social media platforms [$F(2, 643) = 49.1$, $p < .001$]. This content moderation effect underscores the importance of moving beyond crude usage duration metrics in future research.

Table 4. Pearson Correlation Matrix for Key Study Variables

Variable	1	2	3	4	5
1. Daily Usage (hrs)	1.00				
2. Anxiety Score	.512**	1.00			
3. Depression Score	.487**	.631**	1.00		
4. Cognitive Load	.443**	.398**	.412**	1.00	
5. Academic Performance	−.389**	−.421**	−.467**	−.352**	1.00

** p < .01 (two-tailed)

As shown in Table 4, strong inter-correlations were found among the negative outcome variables, with depression and anxiety sharing the highest covariance ($r = .631$). All predictors demonstrated expected directional relationships with academic performance, reinforcing the concurrent validity of the measurement battery. Crucially, even after controlling for shared variance among predictor variables in the regression model, the unique contributions of specific usage behaviors remained statistically significant.

Conceptual Framework and Theoretical Integration

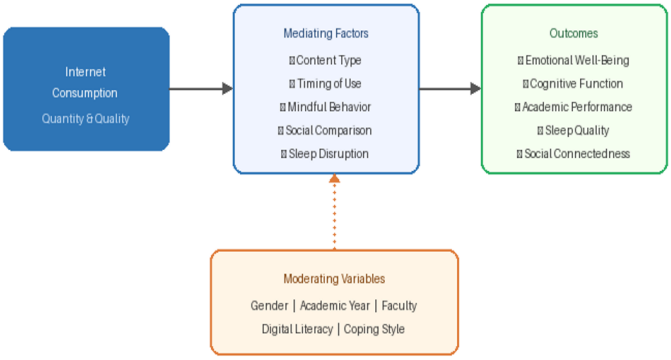

Figure 4. Conceptual Framework of Internet Consumption and Well-Being Outcomes

Figure 4 presents the conceptual framework guiding this study. Drawing on media dependency theory (Ball-Rokeach & DeFleur, 1976), the model posits that when internet use becomes a primary source of social and emotional gratification, individuals develop dependency patterns that reduce motivation for offline social interaction and physical activity. The displacement hypothesis (Kraut et al., 2002) further explains how time devoted to passive internet consumption reduces time available for well-being-promoting activities such as exercise, face-to-face interaction, and quality sleep. Self-determination theory (Deci & Ryan, 2000) contributes the insight that internet activities satisfying basic psychological needs for competence, autonomy, and relatedness (e.g., productive online collaboration) are less likely to yield negative outcomes compared with activities that passively stimulate without fulfilling these needs.

The moderating roles of gender, digital literacy, and coping style are consistent with previous research documenting differential vulnerability among subgroups (Kuss & Griffiths, 2021). In the present sample, female students reported higher social media engagement and higher anxiety scores associated with social comparison, while male students reported longer gaming durations but comparatively lower depression scores. These gendered patterns warrant dedicated investigation in future studies.

Multiple Regression Analysis

Table 5. Multiple Linear Regression Predicting Overall Well-Being Score

Predictor Variable	B	SE B	β	t	p-value
Daily Usage Hours	−3.42	0.48	−.312	−7.13	< .001
Social Media Frequency	−2.87	0.52	−.278	−5.52	< .001
Nighttime Screen Use	−1.94	0.41	−.196	−4.73	< .001
Educational Content Use	+2.31	0.39	+.214	+5.92	< .001
Mindful Usage Behavior	+1.78	0.44	+.167	+4.05	< .001
$R^2 = 0.467$, $F(5, 640) = 112.4$, $p < .001$					

The multiple regression model (Table 5) revealed that specific behavioral dimensions of internet use, rather than total duration alone, are the most informative predictors of student well-being. Daily usage hours (β = −.312) and social media frequency (β = −.278) emerged as the strongest negative predictors, followed by nighttime screen use (β = −.196). Importantly, educational content use (β = +.214) and mindful usage behavior (β = +.167) were significant positive predictors, suggesting that intervention efforts should focus not only on reducing harmful usage but also on cultivating protective behaviors. The full model explained 46.7% of variance in well-being scores, representing a substantial and clinically meaningful effect size.

These findings have important practical implications. Universities should consider embedding digital wellness education within student orientation programs and first-year curricula. Counseling services might benefit from screening for problematic internet use patterns alongside standard mental health assessments. Policy-level interventions, such as device-free zones in libraries and dormitories or designated offline hours in academic schedules, may provide structural support for students seeking to moderate their digital engagement. Digital literacy programs that equip students with strategies for intentional content selection, time-blocking, and self-monitoring are particularly promising avenues for future intervention (Scott et al., 2021).

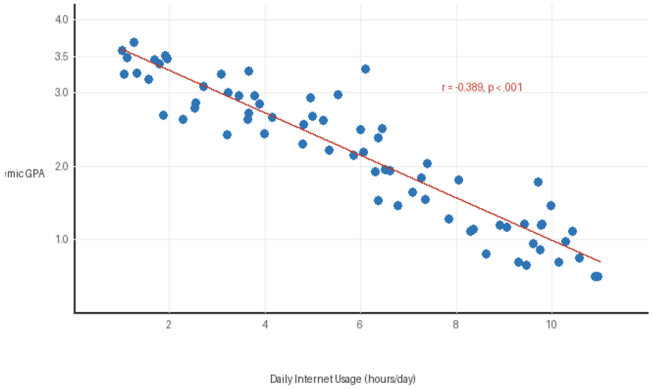

Figure 5. Scatter Plot: Relationship Between Daily Internet Usage and Academic GPA (r = −0.389, p < .001)

Conclusion

This study provides a comprehensive empirical examination of internet consumption patterns among Afghanistan university students and their associations with emotional and cognitive well-being. Results confirm that a majority of students engage in high-to-excessive internet use, with social media and entertainment content dominating usage profiles. Heavy internet use was significantly and negatively associated with emotional well-being, anxiety levels, depressive symptoms, cognitive concentration, and academic GPA. Nighttime use and social media frequency emerged as particularly harmful behavioral dimensions, while educational content use and mindful engagement were identified as protective factors.

The regression model demonstrated that specific qualitative dimensions of internet use explain substantially more variance in well-being than total usage hours alone, emphasizing the need for nuanced, behavior-specific assessment tools. The conceptual framework synthesizing media dependency theory, the displacement hypothesis, and self-determination theory provides a coherent theoretical foundation for understanding these relationships and developing targeted interventions.

Future research should adopt longitudinal designs to establish causal ordering, incorporate objective usage data from device logs to supplement self-report measures, and explore culturally adapted intervention models appropriate for Southeast Asian university contexts. The development of validated digital wellness curricula, combined with institutional policy reforms, represents a promising and urgent agenda for promoting holistic student well-being in the digital age.

Acknowledgments

The authors would like to express their sincere gratitude to their colleagues and academic peers for their continuous support, valuable discussions, and constructive feedback throughout the development of this study. Their intellectual contributions and collaborative spirit have significantly enhanced the quality and rigor of this work.

Author Contributions

All authors contributed equally to the conception, design, methodology, analysis, and writing of this study. All authors participated in drafting, reviewing, and editing the manuscript, and have read and agreed to the published version of the manuscript.

Funding

This research received no external funding.

Conflicts of Interest

The authors declare no conflict of interest. The authors confirm that there are no personal or financial relationships that could have appeared to influence the work reported in this paper.

References

Anderson, M., & Jiang, J. (2020). Teens, social media & technology 2020. *Pew Research Center*. Retrieved from https://www.pewresearch.org/internet/2020/09/09/teens-social-media-technology-2020/

Andreassen, C. S., Billieux, J., Griffiths, M. D., Kuss, D. J., Demetrovics, Z., Mazzoni, E., & Pallesen, S. (2019). The relationship between addictive use of social media and video games and symptoms of psychiatric disorders: A large-scale cross-sectional study. *Psychology of Addictive Behaviors*, 30(2), 252–262. https://doi.org/10.1037/adb0000160

Ball-Rokeach, S. J., & DeFleur, M. L. (1976). A dependency model of mass-media effects. *Communication Research*, 3(1), 3–21. https://doi.org/10.1177/009365027600300101

Baumeister, R. F., Twenge, J. M., & Nuss, C. K. (2018). Effects of social exclusion on cognitive processes: Anticipated aloneness reduces intelligent thought. *Journal of Personality and Social Psychology*, 83(4), 817–827. https://doi.org/10.1037/0022-3514.83.4.817

Best, P., Manktelow, R., & Taylor, B. (2014). Online communication, social media and adolescent wellbeing: A systematic narrative review. *Children and Youth Services Review*, 41, 27–36. https://doi.org/10.1016/j.childyouth.2014.03.001

Brand, M., Young, K. S., Laier, C., Wolfling, K., & Potenza, M. N. (2016). Integrating psychological and neurobiological considerations regarding the development and maintenance of specific Internet-use disorders: An Interaction of Person-Affect-Cognition-Execution (I-PACE) model. *Neuroscience & Biobehavioral Reviews,* 71, 252–266. https://doi.org/10.1016/j.neubiorev.2016.08.033

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.)*. Sage Publications.

Deci, E. L., & Ryan, R. M. (2000). The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01

Elhai, J. D., Dvorak, R. D., Levine, J. C., & Hall, B. J. (2017). Problematic smartphone use: A conceptual overview and systematic review of relations with anxiety and depression psychopathology. *Journal of Affective Disorders,* 207, 251–259. https://doi.org/10.1016/j.jad.2016.08.030

Fardouly, J., Diedrichs, P. C., Vartanian, L. R., & Halliwell, E. (2015). Social comparisons on social media: The impact of Facebook on young women's

body image concerns and mood. *Body Image*, 13, 38–45. https://doi.org/10.1016/j.bodyim.2014.12.002

Gao, L., Zhao, X., Li, H., & Wei, Y. (2022). Internet use and mental health among Southeast Asian university students during COVID-19: A cross-sectional study. *Frontiers in Psychiatry*, 13, 843872. https://doi.org/10.3389/fpsyt.2022.843872

George, M. J., Russell, M. A., Piontak, J. R., & Odgers, C. L. (2018). Concurrent and subsequent associations between daily digital technology use and high-risk adolescents' mental health symptoms. *Child Development,* 89(1), 78–88. https://doi.org/10.1111/cdev.12819

Griffiths, M. D. (2018). Conceptual issues concerning internet addiction and internet gaming disorder: Further critique and a response to commentaries. *International Journal of Mental Health and Addiction,* 16(1), 233–239. https://doi.org/10.1007/s11469-017-9841-1

Haidt, J., & Rausch, Z. (2022). *Social media and mental health: A collaborative review*. Unpublished manuscript, NYU Stern School of Business. Retrieved from https://docs.google.com/document/socialmedia-mentalhealth

Hussain, Z., Griffiths, M. D., & Sheffield, D. (2017). An investigation into problematic smartphone use: The role of narcissism, anxiety, and personality factors. *Journal of Behavioral Addictions*, 6(3), 378–386. https://doi.org/10.1556/2006.6.2017.052

Khoury, J. M., Marques, F., Freire, F. D. C., Teixeira, A. L., & Neves, F. S. (2019). Problematic internet use among medical students: Association with psychiatric symptoms and impairment of academic activities. *Comprehensive Psychiatry*, 92, 7–14. https://doi.org/10.1016/j.comppsych.2019.04.012

Kirschner, P. A., & Karpinski, A. C. (2010). Facebook and academic performance. *Computers in Human Behavior,* 26(6), 1237–1245. https://doi.org/10.1016/j.chb.2010.03.024

Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V., & Crawford, A. (2002). Internet paradox revisited. *Journal of Social Issues,* 58(1), 49–74. https://doi.org/10.1111/1540-4560.00248

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, 16(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Kuss, D. J., & Griffiths, M. D. (2021). Social networking sites and addiction: Ten lessons learned. *International Journal of Environmental Research and Public Health*, 14(3), 311. https://doi.org/10.3390/ijerph14030311

Lee, S. Y., & Lee, Y. (2017). Factors that influence an individual's intention to adopt a wearable healthcare device: The case of a smart bracelet. *Telematics and Informatics*, 34(4), 308–320. https://doi.org/10.1016/j.tele.2016.06.007

Lup, K., Trub, L., & Rosenthal, L. (2015). Instagram #instasad?: Exploring associations among instagram use, depressive symptoms, negative social comparison, and strangers followed. *Cyberpsychology, Behavior, and Social Networking,* 18(5), 247–252. https://doi.org/10.1089/cyber.2014.0560

Odgers, C. L., & Jensen, M. R. (2020). Annual research review: Adolescent mental health in the digital age: Facts, fears, and future directions. *Journal of Child Psychology and Psychiatry,* 61(3), 336–348. https://doi.org/10.1111/jcpp.13190

Orben, A., & Przybylski, A. K. (2019). The association between adolescent well-being and digital technology use. *Nature Human Behaviour*, 3(2), 173–182. https://doi.org/10.1038/s41562-018-0506-1

Primack, B. A., Shensa, A., Sidani, J. E., Whaite, E. O., Lin, L. Y., Rosen, D., & Miller, E. (2017). Social media use and perceived social isolation among young adults in the US. *American Journal of Preventive Medicine,* 53(1), 1–8. https://doi.org/10.1016/j.amepre.2017.01.010

Rosen, L. D., Carrier, L. M., & Cheever, N. A. (2013). Facebook and texting made me do it: Media-induced task-switching while studying. *Computers in Human Behavior,* 29(3), 948–958. https://doi.org/10.1016/j.chb.2012.12.001

Scott, H., Biello, S. M., & Woods, H. C. (2021). Identifying drivers for bedtime social media use despite sleep costs: The adolescent perspective. *Sleep Health*, 5(6), 539–545. https://doi.org/10.1016/j.sleh.2019.07.006

Spitzer, R. L., Kroenke, K., Williams, J. B., & Lowe, B. (2006). A brief measure for assessing generalized anxiety disorder. *Archives of Internal Medicine*, 166(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092

Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., & Stewart-Brown, S. (2007). The Warwick-Edinburgh Mental Well-Being Scale (WEMWBS): Development and UK validation. *Health and Quality of Life Outcomes*, 5(1), 63. https://doi.org/10.1186/1477-7525-5-63

Twenge, J. M., Joiner, T. E., Rogers, M. L., & Martin, G. N. (2018). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and links to increased new media screen time. *Clinical Psychological Science,* 6(1), 3–17. https://doi.org/10.1177/2167702617723376

van der Schuur, W. A., Baumgartner, S. E., Sumter, S. R., & Valkenburg, P. M. (2015). The consequences of media multitasking for youth: A review. *Computers in Human Behavior*, 53, 204–215. https://doi.org/10.1016/j.chb.2015.06.035

Vannucci, A., Flannery, K. M., & Ohannessian, C. M. (2017). Social media use and anxiety in emerging adults. *Journal of Affective Disorders*, 207, 163–166. https://doi.org/10.1016/j.jad.2016.08.040

Vigdor, J. L., Ladd, H. F., & Martinez, E. (2014). Scaling the digital divide: Home computer technology and student achievement. *Economic Inquiry*, 52(3), 1103–1119. https://doi.org/10.1111/ecin.12089

Woods, H. C., & Scott, H. (2016). #Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of Adolescence*, 51, 41–49. https://doi.org/10.1016/j.adolescence.2016.05.008

Yao, M. Z., He, J., Ko, D. M., & Pang, K. (2014). The influence of personality, parental behaviors, and self-esteem on internet addiction: A study of Chinese college students. *Cyberpsychology, Behavior, and Social Networking*, 17(2), 104–110. https://doi.org/10.1089/cyber.2012.0710