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Understanding the Influence of Digital Interaction on Mental Health and Wellbeing Among Young Adults

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Abstract

This paper examines the effects of digital interaction on mental health and well-being. The study is based on a survey of 282 respondents, which explored their usage patterns, attitudes, and the relationships affected by digital interaction. The findings suggest that individuals addicted to digital screens should reduce their usage. Additionally, if any issues arise, they should seek help for their mental well-being, engage in open dialogue discussions, and advocate for legal safeguards. The implications of these findings for digital well-being are discussed, and recommendations are made for individuals to balance their lives for well-being despite the negative effects of digital interactions.

Keywords: *Attitude, Mental well-being, social media impact, Sleeping pattern, Young Adults.*

1. Introduction

In today's digital era, understanding the impact of our online activities on our mental health and well-being is crucial. It's significant to comprehend what our web-based exercises mean for our psychological well-being and prosperity. With the ascent of virtual entertainment, web-based gaming, and informing applications, our regular routines have become progressively entwined with advanced communications. While these innovations offer benefits and they additionally raise concerns in psychological issues. The most significant perspective is to consider the consumption of time on social media. Spending excessive time scrolling through screens, playing online games, and engaging with entertainment channels can affect emotional well-being. This study also focused on two stages; first stage is about advances associations advanced associations precisely mirror our genuine connections. Virtual entertainment profiles and passing internet-based contacts can misshape our feeling of the real world and closeness, prompting sensations of depression, the second stage is about web commitment and other concerns like social examination. The Steady openness to arranged ways
of life via virtual Cyberbullying and pessimistic

comments in virtual conditions further strengthen sensations of depression.

2. Literature Review

The study focused on psychological wellness, mindfulness and compassion in our advanced interactions is crucial. Through exploration and reflection, we can cultivate significant associations and support advanced versatility in an undeniably computerized world. (Rahayu, I., et al.,2023). This study aims [5] to investigate the association between screen time and mental health during adolescence, suggesting that the link might be weaker than previously assumed. The findings highlight the need for further exploration in this area. [6] (Orben, A., & Przybylski, A.2019). This study aims to investigate the correlation between screen time and mental well-being among adolescents [7]. According to "Screen time and

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mental well-being among adolescents: longitudinal evidence from the UK" (Booker, J. K., et al., 2018) [3]. This study aims to explore the evidence for both positive and negative impacts of social media on mental health, emphasizing the necessity for further research in this domain (Shaw, L. H et al., 2019).[1] This study aims to investigate the impact of smartphone use on mental health and well-being, focusing particularly on adolescents. "Smartphone use and smartphone addiction among young people in Switzerland" (Hepp, U., et al., 2019).[2] This study aims to investigate the correlation between screen time and mental well-being among adolescents. According to "Screen time and mental well-being among adolescents: longitudinal evidence from the UK" (Booker, J. Kelly et al.,2018). This study aims to explore the intricate relationship between social media use and mental health, emphasizing the necessity for further investigation to grasp its full implications [4] (Shakya, H.B., & Christakis, N.A 2017).

3. Research Methodology

3.1. Method

The study employed random sampling techniques to ensure representative participant selection. Additionally, it utilized a multi-regression model to analyze the complex relationships between variables. This methodological approach facilitated a comprehensive examination of the factors under investigation, enhancing the study's robustness and reliability.

3.2. Recruitment

The establishes with the participants by call and WhatsApp messaging. They responded favorably to all of my correspondence, and we completed the interview in English. The sample size consists of 282 respondents. The interview was chosen the young adults based on the young adults between age group of 18-33.

4. Research Objectives

RO1: To Examine the correlation between digital interaction and mental health among different demographic groups on young adults.

RO2: To Investigate the impact of excessive screen time on stress levels and psychological well-being across various age groups and occupations.

RO3: To Assess the relationship between digital interaction and the quality of interpersonal relationships, including family dynamics, friendships, and social interactions.

5. Results and Discussion

Interpretation:

The sample predominantly consists of younger individuals (mean age close to the category 1), slightly more females than males, and largely non-employed or in the lowest category of occupation types. Table 1 shows the Descriptive Statistics. There is a notable range of academic backgrounds among the participants, suggesting diversity in educational attainment. However, the occupational type suggests a limited engagement in formal employment. The low variability in some categories such as Gender and Type of Occupation indicates uniformity in those aspects across the sample. In contrast, the higher standard deviation in Academic Background shows more diversity in education levels.

Table 1 Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Age	316	1	3	1.22	.576
Gender	316	1	2	1.57	.496
Occupation	316	1	3	1.14	.421
Academic Background	316	0	4	2.15	.931
Type of Occupation	316	0	2	.09	.316
Valid N (list wise)	316				

Hypothesis

Null Hypothesis (H0): There is no relationship between the selected digital interaction variables and the likelihood of missing important deadlines or appointments due to excessive digital interaction.

Alternative Hypothesis (HA): There is a

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significant relationship between at least one of the selected digital interaction variables and the likelihood of missing important deadlines or appointments due to excessive digital interaction.

Table 2 ANOVA[a]

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.125	10	1.413	7.063	.000[b]
	Residual	60.998	305	.200		
	Total	75.123	315			

Interpretation: The ANOVA results with a high F-value and a significant p-value suggest that the regression model has found a statistically meaningful relationship between the predictors and the outcome. This confirms that aspects of digital interaction indeed play a significant role in affecting individuals' ability to meet important deadlines, justifying further detailed study or policy interventions aimed at mitigating negative impacts of digital interactions.

Null Hypothesis (H0): There is no relationship between the selected predictors (digital interaction behaviours, perceptions, and experiences) and feelings of addiction to digital interactions.

Alternative Hypothesis (HA): There is a significant relationship between one or more predictors (digital interaction behaviours, perceptions, and experiences) and feelings of addiction to digital interactions.

Table 3 ANOVA[a]

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.081	10	1.308	6.326	.000[b]
	Residual	63.071	305	.207		
	Total	76.152	315			

Interpretation:

The significance level (p-value) associated with this F-value is reported as 0.000, which is well below the commonly used threshold of 0.05. This extremely low p-value indicates a very strong level of statistical significance. It suggests that the null hypothesis, which posits that the predictors (like hours of digital interaction, conflicts due to social media, etc.) have no effect on the feelings of addiction, can be rejected with high confidence.

Null Hypothesis (H0): There is no relationship between the predictors (digital device usage, conflicts from social media interactions, overall happiness, frequency of digital interactions, etc.) and the overall impact of digital interaction on individuals' mental health and well-being.

Alternative Hypothesis (HA): There is a significant relationship between one or more of the predictors and the overall impact of digital interaction on individuals' mental health and well-being.

Table 4 ANOVA[a]

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	82.348	10	8.235	12.992	.000[b]
	Residual	193.323	305	.634		
	Total	275.671	315			

Interpretation:

The very low p-value coupled with a high F-value means you can be highly confident that the model explains a significant portion of the variability in how digital interaction impacts mental health and well-being. This suggests that the factors included as predictors in the model (such as hours spent on digital interactions, the effect of digital interactions on real-life relationships, conflicts due to social media, etc.) are relevant and meaningful contributors to understanding the effects of digital interactions on mental health.

Null Hypothesis (H0): The digital interaction habits (such as frequency of use, conflicts due to social media, overall happiness level, etc.) have no influence on whether individuals are considering making changes to their digital interaction habits for better mental well-being.

Alternative Hypothesis (HA): At least one of the digital interaction habits significantly influences

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whether individuals are considering making changes to their digital interaction habits for better mental well-being. Table 2 – 5 shows the ANOVA[a] in below.

Table 5 ANOVA[a]

ANOVA[a]					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	9.993	10	.999	2.647	.004[b]
Residual	115.130	305	.377		
Total	125.123	315			

Interpretation:

F-Value: 2.647, which suggests that the overall regression model significantly predicts the intention to change digital habits.

Significance (p-value): 0.004, indicating that there is a statistically significant relationship between the predictors included in the model and the intention to change digital interaction habits. The probability of these findings occurring by chance under the null hypothesis is very low (less than 0.5%).

6. Findings

The analysis provides evidence that certain aspects of digital interaction, particularly those involving social stressors and negative experiences, are associated with a higher likelihood of missing important deadlines or appointments. This supports the alternative hypothesis that there is a significant relationship between at least one of the digital interaction variables examined and the likelihood of missing important deadlines or appointments due to excessive digital interaction. This suggests that interventions to reduce such negative experiences could potentially help in reducing the adverse impact on personal and professional commitments. The regression analysis provides strong evidence that specific aspects of digital interaction, such as the amount of time spent online, experiences of conflict, stress levels, and social comparison behaviours Given the strong statistical support for the model, stakeholders such as psychologists, educators, and digital content creators should consider these findings when designing interventions, policies, or content aimed at mitigating negative impacts of digital interaction on mental health. This model provides a scientifically robust basis for understanding key factors that influence how digital interactions affect mental well-being, pointing to the importance of factors like overall happiness levels and potentially harmful habits like using digital devices before bedtime. These insights can be utilized to guide more targeted and effective strategies to promote healthier digital interaction habits. Given the strong statistical support for the model, stakeholders such as psychologists, educators, and digital content creators should consider these findings when designing interventions, policies, or content aimed at mitigating negative impacts of digital interaction on mental health. This model provides a scientifically robust basis for understanding key factors that influence how digital interactions affect mental well-being, pointing to the importance of factors like overall happiness levels and potentially harmful habits like using digital devices before bedtime. These insights can be utilized to guide more targeted and effective strategies to promote healthier digital interaction habits. The model's effectiveness in predicting intentions to change digital habits emphasizes the role of personal well-being and specific negative experiences (like body image dissatisfaction) in influencing such decisions. The results highlight the importance of addressing these factors in any digital well-being initiatives or interventions, particularly focusing on improving overall happiness and addressing the impacts of negative online experiences.

7. Recommendations

Develop Targeted Educational Programs should address the specific aspects of digital interactions identified as problematic, such as time management, conflict resolution in online settings, and understanding the impact of social comparisons.

Audience Specific: Tailor educational content to different age groups, particularly younger users who are more susceptible to digital addiction.

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7.1. Enhance Psychological Support Systems

Access to Counselling: Increase access to counselling services that help individuals manage stress and conflicts arising from digital interactions.

Workshops and Seminars: Organize workshops that teach strategies for coping with the psychological impacts of digital media, such as managing digital footprint, dealing with cyberbullying, and understanding the psychological impacts of social media.

7.2. Promote Healthier Digital Habits

Guidelines for Usage: Develop clear guidelines on healthy digital device usage, including recommended time limits and tips for balancing digital and real-life interactions.

Tools and Resources: Encourage the use of apps and software that help monitor and control digital usage, such as screen time trackers and website blockers.

7.3. Policy Development and Implementation

Regulations on Content: Work with digital content creators to ensure that content is designed in ways that minimize addictive features (e.g., endless scrolling, frequent notifications).

Stakeholder Collaboration: Engage with educators, parents, tech companies, and healthcare providers to create a multi-pronged approach to reducing the negative impacts of digital interactions.

7.4. Continuous Research and Feedback

Ongoing Studies: Support ongoing research to continually assess the effectiveness of interventions and understand emerging digital trends that may impact mental health.

Feedback Mechanisms: Implement mechanisms to gather feedback on the effectiveness of interventions and policies to allow for timely adjustments.

Conclusion

The comprehensive analysis of the data and the robust statistical testing conducted as part of this study allow us to draw conclusive insights into the effects of digital interaction on feelings of addiction and behavioral intentions related to digital usage. The statistically significant results, indicated by an extremely low p-value of 0.000 for multiple aspects of digital interaction, confirm with high confidence that there is a meaningful relationship between certain digital behaviours—such as the number of hours spent on digital platforms, conflicts arising from social media use, and other related stressors—and increased feelings of addiction. Furthermore, the significant F-value and a p-value of 0.004 concerning intentions to change digital habits suggest a strong predictive capability of our regression model in understanding and anticipating changes in digital behaviour. This research substantiates the critical role that digital interaction plays in influencing addiction and behavioural intentions. It highlights the need for continued efforts to understand and mitigate the negative impacts of digital environments on individual well-being. By addressing these factors, stakeholders can better support individuals in navigating the digital world in healthier and more productive way

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