Bulletin of Business and Economics, 14(1), 24-29
https://bbejournal.com
https://doi.org/10.61506/01.00574

Assessing the effect of Digital Detoxification on Psychological Burden among Adults in Pakistan

Asif Ali Jauhar[1], Sadia Ashraf[2], Anam Mubashir[3], Majida Sharif[4], Khaild Farooq[5], Ali Asghar Gardezi[6]

Abstract
With increasing reliance on digital devices, concerns about their impact on mental health have grown, particularly among young adults. Digital detox refers to a period during which individuals voluntarily refrain from using digital devices, with the goal of reducing stress, improving sleep, and enhancing overall well-being. A pre-test, followed by a digital detox intervention, and a post-test using an online survey was carried out. The sample comprised 189 participants (males=91, females=98) aged 18-30 years. Findings of the study reveal that digital detox interventions reduced depression and anxiety levels among young adults and improved mental health improvement. Moreover, male adults significantly improve their level of mental health as compared to female. Furthermore, unemployed adults reported higher level of depression and anxiety as compared to employed. In addition, demographic variables play a significant role in reducing psychological burden. Tailoring digital detox programs based on occupational needs, such as targeted support for unemployed individuals who experience heightened anxiety and depression, could also promote mental health equity and provide accessible, non-clinical mental health support. Overall, the study underscores the value of digital detox as a proactive approach to mental health management in a digitally saturated environment.
Keywords: Digital detoxification, psychological burden

1. Introduction

In today's digital age, the use of social media has become an integral part of the daily lives of many people around the world. Data from Statistics shows that by 2023, the number of social media users worldwide has reached 4.9 billion, with the average user spending around 2 hours 31 minutes per day on these platforms. Social media offers various benefits, such as ease of communication, access to information, and means of entertainment. However, overuse of social media has also raised concerns regarding its negative impact on users' mental health. The significant growth in the daily use of social media, especially amongst the younger generation, reflects an event that we should explore further. While social media can provide benefits, overuse can have negative impacts, especially on mental health and quality of life (Ansari et al., 2024). The pervasive use of digital devices, particularly smartphones and social media platforms, has significantly transformed the daily lives of individuals worldwide, including Pakistan. While these technologies have provided numerous benefits, such as enhanced communication, access to information, and entertainment, their excessive use has raised concerns about potential negative consequences on mental health. In Pakistan, as in many other countries, the rising dependency on digital media has led to the phenomenon of digital overload, resulting in adverse psychological effects, such as stress, anxiety, depression, and sleep disturbances (Modibbo & Inuwa, 2020; Ansari et al., 2024).

Digital detoxification refers to the intentional process of abstaining or reducing the use of digital devices, particularly social media, to counterbalance the negative effects of overuse. This practice has gained attention in recent years as a means of improving mental health, increasing productivity, and fostering better social connections in real life. The concept of digital detoxification is especially relevant in the Pakistani context, where the digital landscape is growing rapidly, and individuals are increasingly engaged with online platforms for personal, professional, and educational purposes (Adeel, 2019; Ansari et al., 2024). The rapid proliferation of digital technology has significantly transformed the daily lives of young adults, leading to pervasive engagement with social media, mobile devices, and other digital platforms. While these technological advancements offer numerous benefits, such as increased connectivity and access to information, they also present substantial risks to mental health (Altaf Dar et al., 2023).

The growing concern over the negative impact of excessive digital media use has led to the emergence of "digital detox" interventions, which aim to mitigate these risks by encouraging individuals to disconnect from their digital devices for specific periods (Radtke et al., 2022). This literature review examines existing research on the relationship between digital media use, mental health outcomes, and the efficacy of digital detox interventions in reducing anxiety and depression among young adults. A substantial body of literature has documented the association between excessive digital media use and adverse mental health outcomes, particularly among young adults (Shutzman & Gershy, 2023). For instance, a recent study found that prolonged exposure to social media correlates with increased levels of anxiety, depression, and stress. The negative impact is often attributed to social comparison, cyberbullying, and disrupted sleep patterns, which are exacerbated by the ubiquitous nature of digital devices (Lopes et al., 2022). Similarly, another study reported a significant rise in depressive symptoms among adolescents and young adults that coincided with the surge in smartphone use and social media engagement. Moreover, the addictive nature of digital technology has been linked to mental health challenges (Islam, 2021; Audi & Roussel, 2024).

Research studies have highlighted that internet addiction, characterized by compulsive use and an inability to control digital consumption, is closely associated with anxiety and depression (Shah, 2020).The constant need for validation and fear of missing out (FOMO) are key factors driving this compulsive behavior, leading to a detrimental cycle of increased digital engagement and deteriorating mental well-being (Metin-Orta, 2020). In response to the growing concerns over digital media's impact on mental health, digital detox interventions have gained popularity as a potential solution. Digital detox refers to a period during which individuals voluntarily refrain from using digital devices, with the goal of reducing stress, improving sleep, and enhancing overall well-being. Several studies have explored the effectiveness of such interventions, though the evidence remains mixed. A recent

[1] Corresponding Author, Ph.D Scholar Riphah International University Faisalabad, Pakistan, asifalijohar786786@gmail.com
[2] School of Sociology, Minhaj University Lahore, Pakistan, ashrafsadia60@gmail.com
[3] Institute of Banking and Finance Bahauddin Zakariya University Multan, Pakistan, anamarfan071224@gmail.com
[4] Clinical Psychologist Lahore Pakistan, majidasharif1436@gmail.com
[5] Clinical Psychologist HIV Treatment Centre DHQ Hospital, Jhang, Pakistan, khalidfarooqsiyal@gmail.com
[6] Clinical Psychologist HIV Treatment Centre Allama Iqbal Teaching Hospital Dera Ghazi Khan, Pakistan, asghar.libraa@gmail.com

study observed that there is little evidence for increases in the associations between adolescents' technology engagement and mental health, except for the use of social media leading to emotional problems (Khan, 2020; Vuorre et al., 2021).

A study has demonstrated that participants who engaged in a one-week digital detox reported significant improvements in mental well-being, including reduced anxiety and depressive symptoms (Vuorre et al., 2021). The study found that the absence of constant digital distractions allowed individuals to engage in more meaningful offline activities, such as face-to-face interactions and physical exercise, which are known to have positive effects on mental health. Similarly, another study found that short-term digital detox interventions led to reduced stress levels and improved mood, particularly among individuals who exhibited high levels of digital dependency. However, both studies were conducted in different geographical regions and focused on specific social media detox only (El-Khoury et al., 2021; Russo, 2022).

Previous research has linked social media use to various mental health problems. A study by Twenge found that adolescents who spent more than three hours a day on social media had a higher risk of experiencing mental health problems such as anxiety and depression (Twenge et al., 2018; Akbar & Hayat, 2020). Shensa also reported that intensive social media use was associated with increased symptoms of depression and anxiety in the young adult population (Shensa et al., 2018; Raja & Iqbal, 2019). However, there is a lack of literature on appropriate interventions to address the negative impact of social media use. The practice of digital detox, which refers to the deliberate abstention from electronic devices such as smartphones, is gaining popularity in the health and wellness industry. It is considered a viable solution to mitigate the negative consequences of excessive smartphone usage on one's well-being, social connections, and other areas of life (Rehman & Malik, 2020; Anandpara et al., 2024).

Radtke et al. (2022) performed a comprehensive analysis of existing research to evaluate the efficacy of digital detox programmes in enhancing factors such as well-being and health, social connections, discipline, or productivity. Their comprehensive analysis, which included 21 trials with a total of 3,625 people, revealed diverse outcomes seen in different investigations. Several studies have shown favourable outcomes resulting from interventions, whereas others have shown little impact or even adverse impacts on well-being (Radtke et al., 2022) A further study conducted by Coyne and Woodruff examined the consequences of a 14-day period in which young individuals abstained from social media, limiting their use to 30 minutes each day (Coyne & Woodruff, 2023).

According to a study, this detox has been shown to increase addiction to smartphones and social media while also improving sleep quality, overall life satisfaction, stress levels, perceived healthiness, and supportive connections (Coyne & Woodruff, 2023). However, it is essential to acknowledge that the efficacy of digital detoxes may significantly differ depending on the person and the precise parameters of the detoxification process. Hence, it is crucial to do more study in order to fully understand the processes of change and to create compelling digital detox strategies (Radtke et al., 2022). To summarize, while digital detox has the potential to reduce the adverse consequences of excess digital device use, its efficacy might be inconsistent, highlighting the need for more investigation to enhance these therapies (Anees & Yan, 2019; Radtke et al., 2022; Coyne & Woodruff, 2023).

A study by Liao (2019) examined self-regulation in attention control after a two-week digital detox intervention period. Participants with low depression and anxiety symptoms showed an increase in their self-regulation skills, and the effect sizes were large. Liao (2019) reported that people with mild-to-moderate anxiety and depression symptoms improved their sleep quality with medium to large effect sizes. A medium effect from the seven-day digital detox intervention through an increase in mental well-being was observed, corresponding with results by Liao (2019) showing that participants with mild–moderate depression symptoms reported improvements in flourishing after a smartphone-use reduction period. Three studies found a significant decrease in perceived stress (Liao, 2019).

1.1. Statement of the Problem

In today's digital age, individuals are increasingly dependent on technology, particularly smartphones, social media platforms, and the internet, for personal, social, and professional activities. However, this constant engagement with digital devices has led to concerns regarding its impact on mental and psychological well-being. Issues such as anxiety, depression, sleep disturbances, social isolation, and decreased attention span have been linked to excessive digital consumption. The concept of *digital detoxification*—taking intentional breaks from digital devices and platforms—has emerged as a potential solution to mitigate these negative effects. Despite its growing popularity, there is a limited understanding of the concrete psychological benefits and potential challenges associated with a digital detox. While anecdotal evidence suggests improvements in mood, stress levels, and overall well-being, there is a lack of comprehensive research that examines the short-term and long-term psychological outcomes of digital detoxification. Thus, this study aims to explore the impact of digital detoxification on psychological well-being.

1.2. Rationale of the Study

Technology, particularly smartphones and social media, has become integral to daily life. As of recent years, people spend a significant amount of their time online, leading to a growing concern about the potential effects on mental health. This raises questions about whether disengaging from technology could improve psychological well-being. The constant connectivity and overuse of digital devices have been linked to issues such as stress, anxiety, depression, and sleep disturbances. Studying the impact of digital detoxification on psychological well-being is critical to understanding the role of technology in mental health and finding strategies to mitigate potential negative effects. By doing so, it can contribute to improved mental well-being and provide practical recommendations for individuals who may be struggling with digital overload.

1.3. Objectives of the Study

- To investigate the effect of digital detoxification on depression and anxiety among adults
- To compare the mean score of psychological burden with respect to gender and employment status of the participants

1.4. Significance of the Study

The significance of studying the impact of digital detoxification on psychological well-being is profound, as it addresses the growing concerns about the influence of constant digital device usage on mental health. In recent years, people have become increasingly dependent on smartphones, social media, and the internet, leading to a variety of psychological and emotional challenges. Continuous exposure to digital information, particularly on social media, can lead to information overload and the pressure of constant

connectivity. This can result in increased stress, anxiety, and a sense of being overwhelmed. The blue light emitted from screens, along with late-night device usage, can disturb sleep patterns, leading to insomnia or poor-quality sleep. Sleep deprivation is closely linked to mental health issues like depression and anxiety. The constant switching between apps and notifications can impair attention span and hinder deep work or focus. This lack of focus can affect productivity, leading to frustration and feelings of inadequacy. Paradoxically, digital connections can sometimes contribute to social isolation. Excessive screen time may lead individuals to neglect face-to-face interactions, which are essential for emotional support and maintaining strong social bonds.

Digital detoxification refers to a conscious effort to disconnect from digital devices for a period of time. This practice is increasingly recognized as a method for improving mental clarity, reducing stress, and restoring emotional balance. Disconnecting from the pressure to respond instantly to messages or social media notifications can promote relaxation and alleviate anxiety. Without the interference of screen time before bed, individuals may experience improved sleep patterns, leading to better overall mental health. A digital detox can help individuals regain focus, improve concentration, and engage in more meaningful, undistracted work. Time away from screens allows for more in-person social interactions, which can strengthen relationships and provide emotional support. In summary, studying the impact of digital detoxification is significant as it can provide insights into how reducing screen time may enhance psychological well-being, contributing to a healthier relationship with technology and improving mental health outcomes for individuals in the digital age.

2. Research Methodology

The study was conducted among young adults in Pakistan, aged between 18 and 30 years, who were either university students or early-career professionals, representing a demographic with high digital device usage. The age range of 18-30 was selected as it represents a critical developmental stage characterized by significant life transitions, including higher education, early career establishment, and relationship formation. These transitions often amplify digital engagement due to academic, professional, and social networking demands, making this group particularly vulnerable to digital dependency and its associated mental health effects. Additionally, the preferences and digital consumption patterns of individuals in this age range differ markedly from older age groups, who may exhibit different psychological resilience, coping strategies, and levels of digital engagement. Participants were recruited through social media platforms, university networks, and professional organizations by sharing an invitation link to ensure a diverse sample in terms of background and daily digital usage habits. The study took place over a period of two weeks, during which participants were required to engage in digital detox interventions aimed at reducing their use of digital devices, particularly smartphones, computers, and social media, for specific time intervals (less than 30 minutes each day or in 24 hours) or completely avoiding their use. A pre-test survey was conducted before the intervention, and a post-test survey was conducted after the intervention to measure the anxiety and depression levels. To be eligible, participants needed to report high levels of daily digital device use, defined as five or more hours per day, and they should have experienced some symptoms of anxiety or depression, based on a pre-study screening questionnaire, and reside in Pakistan. Exclusion criteria included individuals with diagnosed mental health disorders that required ongoing medical treatment or counseling, as the study aimed to focus on minimal to severe levels of anxiety and depression, and those who did not follow digital detox practices for a minimum of two weeks.

2.1. Sampling

This study employed a purposive sampling method to recruit participants who met specific inclusion criteria relevant to the research objectives. Young adults aged 18 to 30 years residing in Pakistan were targeted for their high digital device usage and susceptibility to anxiety and depression linked to excessive screen time. The sample size was determined using Cochran's formula for calculating sample sizes in large populations, which is widely used in cross-sectional surveys to ensure statistical reliability and validity. A total of 189 participants were included in the study.

2.2. Instruments

The instruments used in this study included self-reported questionnaires to measure anxiety, depression, and digital detox practices among participants. The Generalized Anxiety Disorder scale (GAD-7) was utilized to assess anxiety levels, while the Patient Health Questionnaire (PHQ-9) was employed to measure depressive symptoms. Both scales are widely validated and reliable tools for assessing anxiety and depression in clinical and non-clinical populations, making them appropriate for this study's focus on young adults with mild to moderate mental health concerns. To assess participants' digital detox behaviors, a custom-designed Digital Detox Practices Questionnaire (DDPQ) was developed based on existing literature on digital detox interventions, which was used in the post-study survey. The items in both questionnaires were rated on a four-point Likert scale (0: Not at all; 1: Several days; 2: More than half the days; 3: Nearly every day). Anxiety scores are classified into four categories based on severity. Scores ranging from 0 to 4 indicate minimal anxiety, suggesting little to no distress. Individuals scoring 5 to 9 experience mild anxiety, reflecting manageable symptoms that may not significantly impair daily functioning. A score between 10 and 14 corresponds to moderate anxiety, characterized by more noticeable symptoms that could affect productivity and interpersonal interactions. Finally, scores from 15 to 21 signify severe anxiety. Depression scores are categorized to reflect the severity of symptoms. Scores between 1 and 4 indicate minimal depression, suggesting negligible emotional distress. Individuals scoring 5 to 9 experience mild depression, with symptoms that are noticeable but may not significantly disrupt daily life. A score of 10 to 14 denotes moderate depression, characterized by more pronounced symptoms that can interfere with routine activities. Scores ranging from 15 to 19 indicate moderately severe depression, often involving substantial distress and functional impairment. Finally, scores between 20 and 27 reflect severe depression.

2.3. Data collection

The data collection process for this study followed a structured approach, beginning with a pre-intervention survey to establish baseline levels of anxiety, depression, and digital device usage behaviors among participants. Before the intervention, participants completed a set of standardized self-reported questionnaires, including the GAD-7 and PHQ-9. These pre-intervention survey measures provided initial data on participants' mental health and their engagement with digital devices, which were used to assess changes in anxiety and depression scores following the intervention. After the pre-intervention survey, participants underwent a

two-week digital detox intervention. During this period, they were instructed to intentionally reduce their use of digital devices, particularly smartphones, computers, and social media. Specific guidelines were provided to help participants limit their digital exposure, such as scheduling daily digital-free periods, avoiding non-essential screen time, and engaging in offline activities. Participants were encouraged to keep a personal log of their digital detox experiences, recording how often and for how long they disconnected from their devices, as well as any challenges or benefits they observed. Regular reminders and support were provided through email or messaging to encourage adherence to the detox plan. Following the two-week intervention, participants completed a post-intervention survey that mirrored the pre-intervention survey, using the same set of questionnaires (GAD-7, PHQ-9) and digital practices questionnaire to assess any changes in their anxiety, depression, and digital device usage habits.

3. Data analysis

The post-test data allowed for a comparison between the pre-and post-intervention scores, enabling the researchers to evaluate the effectiveness of the digital detox intervention in reducing anxiety and depression levels among the participants. To achieve the study's objectives, the data were analyzed using the Statistical Package for the Social Sciences software, version 24.0. Descriptive statistics, including means and standard deviations, were employed to present the demographic characteristics of the participants. Additionally, a two-sample t-test with unequal variances was conducted to analyze the data further.

4. Results

Table 1: Mean scores analysis of depression of pre-test and post-test of digital detoxification

	Pre-test	Post-test
Type of Test	Digital detoxification	Digital detoxification
Total number of participants	189	189
Mean score	26.91	13.83

P-value<.001. There is significant mean score difference on reduction of depression among adults due to digital detoxification.

Table 2: Mean scores analysis of anxiety of pre-test and post-test of digital detoxification

	Pre-test	Post-test
Type of Test	Digital detoxification	Digital detoxification
Total number of participants	189	189
Mean score	19.65	7.21

P-value<.001. P-value<.001. There is significant mean score difference on reduction of anxiety among adults due to digital detoxification.

Table 3: Analysis of depression and anxiety between male and female adult during digital detoxification

Type of Test	Group	N	Mean	Df	t-value	p-value
Depression	Male	91	9.24	187	14.895	.000
	Female	98	16.84			
Anxiety	Male	91	13.79	187	9.543	.000
	Female	98	18.43			

Table 3 describes the significant difference of mean score of depression and anxiety between male and female adults. Findings reveal that male adults overcome their level of depression and anxiety as compared to females.

Table 4: Analysis of depression and anxiety between unemployed and employed adult during digital detoxification

Type of Test	Group	N	Mean	Df	t-value	p-value
Depression	Unemployed	77	19.53	187	7.502	.000
	Employed	112	4.69			
Anxiety	Unemployed	77	17.57	187	11.094	.000
	Employed	112	6.85			

Table 4 shows that employed adults significantly reduce their depression and anxiety as compared to unemployed.

5. Discussion

The results of this study provide significant insights into the impact of digital detox interventions on anxiety and depression levels among young adults. The key findings indicate a positive association between digital detox and improved mental health, specifically in reducing anxiety and depression. This is consistent with previous study (Saleem & Jan, 2024), which highlighted the adverse effects of prolonged digital engagement on mental health, and study (El-Khoury et al., 2021), which highlighted the positive association between digital detox and improved mental health. However, our study not only reaffirms these findings but also adds to the growing body of evidence by emphasizing the potential of structured digital detox interventions in mitigating these negative effects. A critical observation from our findings and literature review is that the duration and frequency of digital detox sessions play a crucial role in determining the effectiveness of the intervention. Participants who engaged in regular, shorter detox periods

reported more substantial mental health improvements than those who opted for longer but infrequent detoxes. This is in contrast to (Coyne & Woodruff, 2023), which suggested that more extended detox periods might be necessary for noticeable improvements in well-being. Thus, suggesting that consistency, rather than length, is the key to success. These findings are particularly important in the context of modern lifestyles, where the feasibility of extended detox periods might be limited. The digital detox intervention led to a statistically significant reduction in anxiety across all demographic groups. Gender-wise, males experienced a greater reduction in anxiety scores than females, aligning with findings in (El-Khoury et al., 2021) study , who reported that men might respond more favorably to digital detox due to differences in coping mechanisms and stress reactivity. However, this finding diverges from (He et al., 2024), which suggested that females might benefit more from digital disengagement interventions due to their higher baseline social media usage and susceptibility to online stressors. Future studies could explore these gender differences further, examining whether specific intervention components are more effective for one gender over the other.

In terms of occupational status, unemployed participants had the highest baseline anxiety levels and variance post-intervention, underscoring the link between employment status and mental health. This finding indicates that unemployment is strongly associated with elevated anxiety and depression due to financial insecurity and social isolation. Moreover, employed individuals, especially part-time workers, showed significant anxiety reductions post-detox, which suggests that digital disengagement could serve as a helpful mental health intervention within work environments. A study by Liao (2019) examined self-regulation in attention control after a two-week digital detox intervention period. Participants with low depression and anxiety symptoms showed an increase in their self-regulation skills, and the effect sizes were large. A study by Liao (2019) examined self-regulation in attention control after a two-week digital detox intervention period. Participants with low depression and anxiety symptoms showed an increase in their self-regulation skills, and the effect sizes were large. Liao (2019) reported that people with mild-to-moderate anxiety and depression symptoms improved their sleep quality with medium to large effect sizes. A medium effect from the seven-day digital detox intervention through an increase in mental well-being was observed, corresponding with results by Liao (2019) showing that participants with mild–moderate depression symptoms reported improvements in flourishing after a smartphone-use reduction period. Three studies found a significant decrease in perceived stress (Liao, 2019).

The study also revealed substantial reductions in depression scores across demographics, moving from moderate to mild levels post-intervention. Similar to anxiety results, females exhibited slightly higher post-intervention depression scores than males, which highlights gender-specific differences in stress processing, with females tending to report higher depressive symptoms even post-intervention. Occupationally, unemployed individuals had the highest initial depression levels, which may reflect a strong correlation between unemployment and depression severity, emphasizing the need for accessible mental health interventions for this demographic.

6. Conclusion

This study highlights the effectiveness of structured digital detox interventions in reducing anxiety and depression levels among young adults. Findings of the study reveal that digital detox interventions reduced depression and anxiety levels among young adults and improved mental health improvement. Moreover, male adults significantly improve their level of mental health as compared to female. Furthermore, unemployed adults reported higher level of depression and anxiety as compared to employed. In addition, demographic variables play a significant role in reducing psychological burden. Tailoring digital detox programs based on occupational needs, such as targeted support for unemployed individuals who experience heightened anxiety and depression, could also promote mental health equity and provide accessible, non-clinical mental health support. Overall, the study underscores the value of digital detox as a proactive approach to mental health management in a digitally saturated environment.

6.1. Contribution of the Study

The study of digital detoxification and its impact on psychological well-being highlights several key contributions that can be valuable in understanding how the constant exposure to digital technology affects mental health, and how taking intentional breaks from digital devices can improve psychological outcomes. Here are the main contributions that such a study might make:

Understanding Psychological Relief: The study can contribute to a deeper understanding of the psychological relief that comes from stepping away from the constant notifications, social media pressures, and information overload associated with digital devices. Digital detoxification may help reduce feelings of stress, anxiety, and burnout that result from constant connectivity.

Mental Health Benefits: By examining the impact of digital detox, such a study may demonstrate how taking breaks from digital devices can improve mental health outcomes, including reduced anxiety, depression, and better sleep quality. It can also show how disconnecting can promote positive emotions like relaxation, mindfulness, and a sense of presence.

Improved Focus and Productivity: The study may highlight the cognitive benefits of digital detox, such as increased focus, attention, and productivity. With fewer distractions, individuals may experience greater cognitive clarity, and enhanced problem-solving and creativity.

Enhanced Social Interaction: The research could emphasize how digital detoxification fosters in-person, meaningful interactions and promotes real-world relationships. With reduced reliance on digital communication, individuals might reconnect with others on a deeper level, reducing feelings of loneliness and social isolation.

Development of Healthy Digital Habits: The study might suggest strategies for developing healthier digital habits, showing that while technology is not inherently harmful, the way it is used can have significant psychological consequences. It can contribute to designing strategies or interventions that encourage balanced tech use, such as setting boundaries, limiting screen time, and engaging in offline activities.

Impact on Self-esteem and Body Image: Digital detoxification may be linked to reduced exposure to curated online content, helping to mitigate the negative impacts of social media on body image and self-esteem. A study could provide evidence of how time away from these platforms leads to a more realistic and positive self-perception.

Long-term Psychological Effects: By studying the long-term psychological effects of digital detox, the research could help to uncover whether consistent breaks from technology can lead to sustained improvements in mental well-being, suggesting that detoxification might be a crucial long-term mental health strategy.

Overall, the contribution of a study on digital detoxification to psychological well-being would be in providing empirical evidence on how digital habits influence mental health and offering insights into how intentional disconnection can serve as a protective mechanism for mental health in the digital age.

References

Adeel, U. (2019). Analyzing the Impact of Government Expenditure on the Health Sector: Evidence from Pakistan. *Journal of Business and Economic Options*, *2*(2), 54-66.

Akbar, R., & Hayat, A. (2020). Psychological Health of Children Engaged in Hazardous Labor: A Study in Lahore, Pakistan. *Journal of Policy Options*, *3*(2).

Altaf Dar, M., Maqbool, M., Ara, I., & Zehravi, M. (2023). The intersection of technology and mental health: enhancing access and care. *International journal of adolescent medicine and health*, *35*(5), 423-428.

Anandpara, G., Kharadi, A., Vidja, P., Chauhan, Y., Mahajan, S., & Patel, J. (2024). A comprehensive review on digital detox: A newer health and wellness trend in the current era. *Cureus*, *16*(4).

Anees, M., & Yan, W. (2019). An Overview about the Challenges of Urban Expansion on Environmental Health in Pakistan. *Journal of Energy and Environmental Policy Options*, *2*(3), 64-71.

Ansari, S., Iqbal, N., Azeem, A., & Danyal, K. (2024). Improving Well-Being Through Digital Detoxification Among Social Media Users: A Systematic Review and Meta-Analysis. *Cyberpsychology, Behavior, and Social Networking*, *27*(11), 753-770.

Audi, M., & Roussel, Y. (2024). Exploring the Link Between Public Health and External Debt in Saudi Arabia. *Journal of Business and Economic Options*, *7*(4), 1-12.

Coyne, P., & Woodruff, S. J. (2023). Taking a break: the effects of partaking in a two-week social media digital detox on problematic smartphone and social media use, and other health-related outcomes among young adults. *Behavioral Sciences*, *13*(12), 1004.

El-Khoury, J., Haidar, R., Kanj, R. R., Ali, L. B., & Majari, G. (2021). Characteristics of social media 'detoxification'in university students. *Libyan Journal of Medicine*, *16*(1).

He, L., Firdaus, A., Gong, J., Dharejo, N., & Aksar, I. A. (2024). How the social media impact women's psychological well-being in the patriarchal structure? The moderating effect of social capital. *BMC Public Health*, *24*(1), 581.

Islam, M. (2021, September). Link between excessive smartphone use and sleeping disorders and depression among South Korean University students. In *Healthcare* (Vol. 9, No. 9, p. 1213). MDPI.

Khan, K. K. (2020). Assessing the Impact of Climate Change on Women's Health: A Case Study in Lahore, Punjab, Pakistan. *Journal of Policy Options*, *3*(3), 82-89.

Liao, W. (2019). *Put your smartphone down: Preliminary evidence that reducing smartphone use improves psychological well-being in people with poor mental health* (Doctoral dissertation, University of Otago).

Lopes, L. S., Valentini, J. P., Monteiro, T. H., Costacurta, M. C. D. F., Soares, L. O. N., Telfar-Barnard, L., & Nunes, P. V. (2022). Problematic social media use and its relationship with depression or anxiety: a systematic review. *Cyberpsychology, Behavior, and Social Networking*, *25*(11), 691-702.

Metin-Orta, İ. (2020). Fear of Missing Out, Internet Addiction and Their Relationship to Psychological Symptoms. *Addicta: The Turkish Journal on Addictions*, *7*(1).

Modibbo, H., & Inuwa, N. (2020). Health Outcomes and Economic Growth Nexus: Evidence from Nigeria. *Journal of Business and Economic Options*, *3*(2), 46-55.

Radtke, T., Apel, T., Schenkel, K., Keller, J., & von Lindern, E. (2022). Digital detox: An effective solution in the smartphone era? A systematic literature review. *Mobile Media & Communication*, *10*(2), 190-215.

Raja, U., & Iqbal, N. (2019). Ensuring Worker Safety in Lahore's Large Industries: A Study on Occupational Health, Safety, and Risk Management. *Journal of Energy and Environmental Policy Options*, *2*(4), 117-124.

Rehman, A. U., & Malik, S. (2020). Environmental and Health Hazards of Pakistan's Leather Industry. *Journal of Energy and Environmental Policy Options*, *3*(3), 96-103.

Russo, L. (2022). The impact of slow productivity on healthcare costs in a no-growth: An empirical analysis. *Journal of Policy Options*, *5*(4), 22-28.

Saleem, S. M., & Jan, S. S. (2024). A Cross-sectional Study of Mental Health Effects of Excessive Screen Time and Social Media Use among Indian Adolescents and Young Adults. *Journal of Nature and Science of Medicine*, 10-4103.

Shah, D. (2020). *Understanding the Nature of Internet Overuse as an Addictive Disorder or a Compulsion: An Exploratory Study*. Maharaja Sayajirao University of Baroda (India).

Shensa, A., Sidani, J. E., Dew, M. A., Escobar-Viera, C. G., & Primack, B. A. (2018). Social media use and depression and anxiety symptoms: A cluster analysis. *American journal of health behavior*, *42*(2), 116-128.

Shutzman, B., & Gershy, N. (2023). Children's excessive digital media use, mental health problems and the protective role of parenting during COVID-19. *Computers in human behavior*, *139*, 107559.

Twenge, J. M., Joiner, T. E., Rogers, M. L., & Martin, G. N. (2018). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among US adolescents after 2010 and links to increased new media screen time. *Clinical psychological science*, *6*(1), 3-17.

Vuorre, M., Orben, A., & Przybylski, A. K. (2021). There is no evidence that associations between adolescents' digital technology engagement and mental health problems have increased. *Clinical Psychological Science*, *9*(5), 823-835.