Journal of Advances in Science and Technology
Vol.23, Issue No. 2 June-2026, ISSN 2230-9659

Digital Mental Health Tools- Way to Overcome Suffering Over Technology Addiction

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Abstract: Digital mental health is a radical departure from traditional clinical practice. Recent advances, including mobile applications, artificial intelligence-driven tools, and other innovations have the potential to improve access to care, reduce costs, and personalize mental health treatment. These tools can provide early detection of mental health concerns, deliver tailored interventions, and monitor patients in real time, facilitating continuous, individualized care. Clinician-patient collaboration is also enhanced, with data-driven insights fostering evidence-based decision-making. However, challenges related to privacy, clinical effectiveness, and equity (particularly in the context of the digital divide) remain. Ethical safeguards, regulatory oversight, and cultural sensitivity are required to optimize the potential of digital mental health tools and maximize trust. As mental health needs grow worldwide, digital health tools offer scalable and sustainable alternatives to traditional care models, increasing access, reducing disparities, and promoting resilience. This paper will discuss various aspects of student wellbeing, digital mental health and the tools that help to achieve digital mental health.

Keywords: Digital health, Artificial intelligence, Accessibility, Mental well-being, Privacy, Equity

INTRODUCTION

Before we being with digital mental health let's look at some facts regarding mobile, impact of mobile facts

- There are 8.65 billion active subscriptions to a mobile phone service in the entire world. That is a LOT of people with a mobile phone.
- There are an estimated 2 billion 5G subscriptions in existence; that is just under a quarter of ALL phone subscriptions in existence.
- With this many mobile phone subscriptions, it's no surprise that we place around 13.5 billion phone calls a day.
- A staggering 128,712,420 children under 5 years old have a smartphone of their own.

- A staggering 682,375,073 kids between the ages of 5 and 14 years old own a smartphone.
- In 2025, the world sold 1.84 billion smartphones. That being said, this isn't the highest from which we've sold handsets. In 2014, we shipped 1.85 billion handsets worldwide.
- 66% of phone owners suffer from nomophobia, the abject fear that people feel when they're not in the presence of their phone.

For many people, checking their phones first thing in the morning, checking their phones while eating meals, and scrolling through their phones when it's 2am has become a norm. Although the internet is a part of our daily lives, there is such a thing as internet addiction when the internet is used in an uncontrolled manner.

What is Internet Addiction?

Internet addiction is a pattern of behaviors characterized by excessive or compulsive computer and internet use that interferes with everyday life and activities. This type of addiction is becoming increasingly common and affects 1.5% to 8.2% of the population in the United States and Europe.

Internet habits might be considered addictive if an individual displays core characteristic behaviors including:

- Thoughts about online activities dominate the mind.
- The individual cannot gauge how much time online activities will take.
- The individual must increase the amount of time spent online to achieve satisfaction.
- The individual experiences withdrawal symptoms when not online.
- The individual continues online activities despite negative consequences.

Individuals with internet addiction often end up spending longer than intended time online. They experience mood swings and become agitated or irritable when they try to cut their usage. The addiction is similar to substance addiction. Behavioral patterns include tolerance, withdrawal, and continued usage despite problems.

Symptoms of Internet Addiction

Symptoms of Internet addiction can show up in all aspects of a person's daily life. As the use of online activities dominates one's life, one may experience noticeable and subtle changes in one's behavior, daily routine, and overall health.

Physical and Behavioral Symptoms

As your body responds to an excessive use of the internet, there are physical symptoms that can be quite obvious. These physical symptoms can include:

- Chronic headaches and neck stiffness
- Dry eyes and vision problems
- Carpal tunnel syndrome
- Difficulty sleeping (insomnia)
- Major changes in weight.
- Poor personal hygiene.

Internet addiction may start slowly but eventually can disrupt daily life. In fact, many individuals find themselves hiding or lying about their internet usage once it reaches 38 hours per week and becomes uncontrollable.

Internet Addiction: Should You Be Concerned?

Psychological and Emotional Impact

Excessive internet use can have a significant impact on your emotional well-being, causing anxiety when you're unable to access the internet, irritability, mood swings, and obsessive internet use. Internet addiction has been consistently linked to psychiatric symptoms, such as depressive disorders, anxiety disorders, and obsessive compulsive disorders.

Social and Professional Consequences

The effects can reach beyond the individual, affecting personal relationships with one person and overall. Work or academic performance can decline as internet use takes priority over

responsibilities, and in extreme cases, relationships, education, and career can be put at risk in favor of time online.

If these symptoms persist over time, they should not be considered "normal." Rather, they are a red flag that the individual may be developing a problem and may benefit from help.

Causes of Internet Addiction

The causes of Internet addiction are a complex blend of biological, psychological, and environmental factors. Brain reward center responds to Internet use in the same way it does other addictions. The brain releases dopamine and establishes pathways of pleasure that reinforce the behavior.

Genetic factors contribute to the development of Internet addiction. For instance, genetic tendency to addictive behavior. But this is just one of the factors that contribute to the development of Internet addiction. Other factors include:

1. Neurobiological changes – the prefrontal areas and gray matter of the brain may be affected by Internet addiction similar to the way they are affected by drug addiction.

2. Psychological predisposition – those with higher scores on depression, anxiety, and hostility are at increased risk of Internet addiction

3. Family environment – teens from families with high levels of conflict show higher levels of Internet addiction.

4. School factors – negative school environments and poor grades are associated with Internet addiction.

5. Early exposure to the Internet – teens who begin using the Internet at a younger age are at increased risk of Internet addiction. 6% of teens become severely addicted.

Impact of Internet Addiction on Psychological Well-being

Internet addiction behavior patterns are known to be associated with many mental problems. According to various studies, overusing the internet results in a number of negative consequences for one's psyche and quality of life in general. In particular, internet addicts among students have much higher levels of anxiety and depression, as well as poor academic achievements.

Internet addiction may lead to many psychological disorders, such as:

- **Depression and Anxiety:** People addicted to the internet demonstrate depressive tendencies up to 14 times more often.
- **Social Isolation:** The tendency to substitute substantial real-life relationships with trivial virtual connections can lead to increased social isolation.
- **Changes in Brain Architecture:** Brain imaging shows that individuals addicted to the internet have differences in their brain regions that deal with emotion, executive functions, and decision-making.
- **Sleep Disturbance:** Increased exposure to screens interferes with normal sleeping patterns, which adversely affects one's mental well-being.

It is especially important to mention that the two phenomena are mutually reinforcing since those suffering from anxiety or depression might seek refuge in the digital world. However, this strategy does not solve their problems but contributes to worsening their situation, forming a vicious circle.

As an example of the problem's prevalence, it is vital to note that 45.5% of medical students are internet addicted.

Apart from personal issues, internet addiction is capable of damaging interpersonal relationships as well. With the lack of social life, patients tend to spend even more time online.

What is Digital mental health?

Digital mental health refers to the use of technological innovations such as mobile apps, wearable devices, internet, and artificial intelligence in delivering mental health care. These technologies aim at increasing accessibility to mental health care, supporting mental well-being, and augmenting traditional treatments, with much focus on self-treatment or guided assistance.

What do you mean by Student Well-Being

Student well-being can be defined as a state when the student feels motivated, energized, and both physically and psychologically healthy throughout his or her time in the educational

institution. This definition does not only include healthy state of mind and body; however, well-being of students is also associated with sustained productivity and development, as well as with maintaining good mental state of the learner throughout academic challenges.

The concept of well-being of students involves understanding and regulating a complex interaction that occurs between study demands (time pressure, heavy workload, cognitive effort) and resources available for studying (support from lecturers, constructive feedback, autonomy, etc.). If the level of resources matches the demand on students in terms of volume, then they feel engaged, productive, and successful. In contrast, mismatch between demands and resources results in a negative impact on student well-being, thus leading to possible problems such as burnout, disengagement, and even dropping out.

Proper regulation of such interaction is key to success in developing sustainable well-being of students.

Problems Associated with Wellbeing in a Technological Age

The introduction of technological advancements into our day-to-day activities has made more information accessible, the creation of networks that have formed socially active communities online, and tools that promote inclusivity and learning. However, the continued advancement of technological devices being incorporated in classrooms and at home has presented problems that affect teachers, students, and their families.

Sleep deprivation is one issue that arises, where the presence of cell phones and laptops in our bedrooms adversely affects our circadian rhythm. In addition to the loss of sleep, there are numerous consequences of poor sleep that affect us physically and mentally.

Similarly, cyberbullying has escalated in the modern-day due to greater accessibility, leading individuals to become vulnerable to attacks from anonymity on the internet. The digital world becomes instrumental in the formation of self-identity among young people and determines their actions and decision-making capabilities. In addition to that, the increasing use of social media and high standards of beauty have led to an increase in body image problems, self-acceptance issues, and disorders related to food intake.

The phenomenon of FOMO becomes real among us and leads to discontentment and feelings of being excluded from everything. This fear of being excluded is associated with sleep

deprivation, cyberbullying, and the larger problem of distractions that prevents students from learning academically.

The relationship between the digital world and our attention as well as mental abilities. Overuse of electronic gadgets and spending too much time looking at the screen reduces our capability to focus as well as concentrate on what we do. Our mind becomes busy in notifications and switching from one activity to another, resulting in less concentration power.

Issues faced by college and university students

College students go through anxiety and depression symptoms due to different factors, but there are specific stressors common to all of them. Some examples include:

- **Academic pressure.** Many college students are faced with the stress of having to deal with a work schedule and pressures of success which they have never encountered before. This may lead to anxiety and depression. Financial worries may also add to the problem.
- **Lack of sleep.** This is due to several factors, including overburdening workloads, hectic schedules, poor time management, and high levels of screen time. Lack of sleep is associated with irritation, disorientation, stress, and depression. College students who suffer from ADHD or depression are at risk of developing insomnia.
- **Loneliness.** Studies show that loneliness experienced by college students may lead to more anxiety, stress, and depression symptoms down the road. Unfortunately, many college students feel like they experience exclusion, isolation, or lack of company.

According to the last year's Healthy Minds Study:

- 67% of college students feel isolated from others at least sometimes, and 27% of them feel like this regularly.
- 67% of college students experience exclusion sometimes, and 23% of them often feel this way.
- 61% of college students lack companionship at least sometimes, whereas 21% of them frequently state this.
- Learning how to live independently. Many college students start living independently or in a shared accommodation for the first time ever; they have to organize themselves and find their identity.

- Anxiety and depression onset during adulthood. One research paper showed that anxiety disorders usually develop in an individual when he/she reaches the age of 21.

The Application of Artificial Intelligence in Mental Health Care

A number of problems have existed within the realm of mental healthcare: discrimination, restricted accessibility, and scarcity of resources. AI has sought out to overcome such hurdles by implementing machine learning algorithms in different applications. Convenience and efficiency within caregiving is ensured via machine coding technology meant for helping humans in essence.

Here arises the concept of therapy AI. Who wouldn't want to discuss very private matters under conditions of perfect confidentiality and nonjudgment? The answer would be yes, and this is precisely what therapy AI offers. With the help of sophisticated machine learning chatbots, people can freely engage in dialogue about their desire to take a hiatus from their mental well-being without having to fear any backlash. The advancement in virtual therapy is achieved because of AI therapy bots that, through constant interactions with humans, become ever-smarter. They imitate human behaviors while supporting users in serene and stress-free environments.

Based on the enhancements and modifications suggested by the users, surveys about the mental therapy mobile application have shown improvement over time. There have been many basic mobile applications that were designed to assist users in reducing their mental stress digitally. Woebot, Wysa, and Replika are ideal examples of AI-based mental therapy mobile applications. Such applications offer instant assistance using interactive conversations and innovative mental analysis techniques. The applications can analyze user emotions and provide constructive and useful recommendations, making it easier for users to cope with anxiety, depression, and stress.

The Advantages of Applying Artificial Intelligence in Mental Health Treatments

Despite seeming too futuristic, advantages of using artificial intelligence in mental health treatments have become a reality. According to science, the combination of such technologies and conventional approaches to treating mental illnesses yields better treatment outcomes and particularly for those who suffer from chronic conditions.

Some of the advantages discussed in scientific literature are:

1. Accessibility: Applications based on AI and machine learning overcome spatial constraints, which prevent people from seeking mental health care services. Diagnoses and therapy options are available anytime anywhere with access to the internet.

2. Affordability: Tele-therapies that incorporate the use of technologies to deliver mental health care make this service more affordable as digital therapies cost less than face-to-face treatment.

3. Anonymity: An AI-based platform makes patients share their personal data since they feel safe knowing their data won't be leaked, which ensures better therapeutic results.

4. Personalization: AI technologies develop appropriate responses to stimuli and thus tailor the therapy process according to the patient's emotional state.

The Innovation of AI Treatment of Mental Health Problems

As the AI mental health care is progressing to become more complex, the innovation of AI technology in this area has a huge potential. There are innovations which may soon become real: for example, the creation of an algorithm that would predict the occurrence of certain mental problems beforehand or the development of VR environment that is used specifically for the treatment of posttraumatic stress disorder and phobias.

Nevertheless, we should consider the reasonability of such assumptions as follows: does AI mean to substitute the work of therapists? The answer is negative because AI is not meant to substitute therapists – rather, it complements their efforts and allows them to deliver personalized and continuous treatment to the patient. Counseling applications with AI assist in contacting a patient at the beginning stage of treatment and help him/her get to human therapy upon identifying signs of disorders if needed.

Imagine visiting a therapist, meeting the friendly atmosphere of his/her office and having a report on your recent mental wellbeing compiled by the application with AI algorithms. Such interface of man and machine is the ultimate innovation of the field.

What is a digital mental health intervention?

A digital mental health intervention, or an e-mental health intervention, is any technological tool aimed at promoting mental well-being. Examples of such interventions are mobile applications, wearable technology, and web platforms. Some digital mental health

interventions may be very simple tools providing self-help information, while others could be complex systems used for evidence-based therapy. The most common types of digital mental health interventions can be classified as follows:

Information and psychoeducation: Web portals and applications that provide self-help content, based on NHS guidelines or charities.

- **Self-management:** Mood tracking applications, mindfulness training applications, and breathing exercises.
- **Guided online therapy:** Web portals and applications that deliver internet Cognitive Behavioural Therapy (iCBT), usually with additional coaching and therapeutic supervision.
- **Digital therapeutics (DTx):** Evidence-based interventions that make health claims. DTx interventions are clinically evaluated and may be prescribed and procured by the NHS.

Digital Mental Health AI Tools and Applications

List of digital mental health AI applicationsdepending upon their function:

1. Chatbots or Companions for Therapy

These digital tools provide instant support using the technique of chatting based on principles of CBT or dialectical behavioral therapy.

- **Wysa**: An AI-driven clinically proven chatbot that provides therapy services related to stress and anxiety, including a hybrid technique involving access to human coaches.
- **Woebot Health:** A "mental health" chatbot companion that builds up long-lasting relationships with people via daily interactions to help them deal with depression and anxiety.
- **Youper**: An AI-based conversational assistant that utilizes NLP to engage in conversation and offers individualized therapies of CBT, ACT, and DBT based on mood assessment.

- **Replika**: A conversational companion AI tool that learns from interactions and offers customized non-judgmental chat, mainly helping users cope with loneliness and anxiety.
- **Yuna**: A voice-first conversational AI self-therapy app that enables users to "talk it out."

2. Personalized Health & Wellness Solutions

- **Headspace (Ebb):** A mindfulness mobile application that launched an AI-driven feature named Ebb for two-way interactive support with activities like journaling, self-reflection, and developing good habits.
- **Calm**: Offers users personalized relaxation and sleep solutions via AI-generated content, including soothing stories and sounds of nature.
- **Mindsera**: An AI-driven journaling tool that provides users with emotional analysis, insights, and advice based on persona-driven history learned from their writing.
- **Neurofit**: An AI-driven nervous system training application that helps individuals learn new routines, movements, and manage stress using wearable technology and AI-driven analysis.

3. Diagnostic and Monitoring Tools (Speech/Visual)

- **Kintsugi**: Voice analysis tool that provides live emotional analysis and uses a 30-second speech sample to identify signs of depression.
- **Affectiva**: Emotion AI tool used for researching facial expression analysis to recognize micro-expressions, thus allowing earlier identification of the depression syndrome.
- **Mindstrong Health**: Smartphone analysis application that monitors typing speed and typing mistakes to identify any cognitive decline and detect depression or bipolar disorder relapse.

4. Tools for Supporting Therapists

- **Eleos Health**: It is a behavior health platform that makes use of NLP in analyzing therapy sessions, documentation automation, and giving insights on treatment process.
- **Upheal**: It is an artificial intelligence-driven therapist session transcription tool that writes SOAP/DAP progress reports and monitors progress metrics.
- **Heidi**: It is dedicated to automated clinical notes and report writing for therapists.

CONCLUSION

However, the evolution of the digital realm has made its presence felt in many fields, including that of mental health treatment. Indeed, various innovations, from mobile applications to teletherapy platforms and chatbot-assisted consultations, can enhance access to mental care, provide personalized and timely assistance, and allow patients to practice self-regulation at home. However, one should consider the challenges associated with the development of digital mental health solutions. The lack of clinical validation and evidence-based approaches in this field poses a serious problem, not to mention the ethical issues involved in the implementation of digital technologies in medicine.

In conclusion, the implementation of new innovations in mental health should be approached cautiously. While the advantages of this type of healthcare are undeniable, further study and analysis is needed before they are widely introduced into clinical settings. Digital mental health treatment can prove to be an effective addition to the arsenal of conventional methods, providing numerous benefits. In particular, it could help increase access to treatment, support prevention measures, and enhance traditional treatment.

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