The social study of the digital wellbeing era: opportunities and challenges

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Abstract. Digital devices assist our freedom by linking us to people, facilities, and content autonomously of place and time conditions. Simultaneously, they limit our independence. People face new decisions, conflicts, and burdens in connection to where, whether, and when people link and segregate. Digital wellbeing is a new method that relates to the deficiency of symmetry that people may face in connection to smart devices networking. Digital wellbeing includes section an advanced pattern ideology managing the industry's output, section a group of applications to enhance individuals with smart methodology.This study provides an overview of the current state of digital life and wellness, including its benefits and drawbacks. In this study, we define and investigate how digital wellbeing methodologies are helpful for people in various situations, as well as conduct a review of the young generation to determine how good it is and what impact it has on people. It will deliver a detailed examination of digital wellbeing in various areas for instance the healthcare sector and education sector. The suggested paper will also go through a proper examination of the potential and difficulties in the sectors of medical and education.

Keywords: Digital, Education, Healthcare, Opportunities, Issues, Wellbeing.

1 Introduction

Researchers in the field of healthcare employ digital well-being and healthcare tools creators are being asked to articulate the idea that when people interact with advanced tools, it should improve their mental and physical wellbeing in a verifiable method.The key objective is to improve digital well-being in an innovative way that stimulates beneficial and healthy use and supports the individual to manage a healthy lifestyle of human. Digital technologies develop the connection of information accessible to individuals and enhance human production and well-being. Online communal connection programs commonly balance offline connections. Authorities also availed digital technology to make communal services more efficient.

According to experts questioned by the PRC (Pew Research Center), the healthcare business gains greater benefits from digital growth. For example, sources about security, healing, and physical wellbeing can be acquired in the next example medicine for sufferers utilizing smart technology (1). This is a valuable tool that has proven to be useful in a variety of situations, including pregnancy and care for older persons. A quicker approach to dataset allows hospitals to situate sufferers inside the hospital and obtain records on earlier problems and

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other wellbeing condition difficulties, allowing patients to receive care more quickly, such as when a pregnant female goes through a regulated procedure with no unknowns.

A further advantage is the utilization of systematic facilities. We can obtain e-learning at any time and practically anywhere thanks to the digital age. Search facilities like Google, which can return hundreds of outcomes for a single inquiry, make it simple to get data for study (2). Internet portals provide a quicker, more suitable key to making purchases while also allowing us to do it from anywhere you desire. Amazon is the clearest illustration of this; for a single thing, buy orders can be completed quicker, and the product selection is far more than in any shop that would be presented. It's easier than ever to organize, reserve trips, and plan vacations, or experiences.

Recently, technological healthcare plays an important function in the academic, medical, and farming industries, all of which are essential to a person's healthcare. In the field of education, technological healthcare paves the path for the proper things to be done, allowing students to gain more information skills. The majority of teenagers waste a significant amount of time on digital platforms. Digital healthcare supports the greatest innovation for clinics and all medical associations in the health industry. For instance, in the situation of COVID-19, which has been classified as a pandemic infection by the world health organization, clinicians and medical providers are attempting to concentrate on a patient's well-being while battling the outbreak. People are also subjected to a number of undesirable consequences as a result of their online life. The digital revolution has resulted in a number of behavioral illnesses, such as inattentive behavior, and anxiety which have a negative impact on individual life. Internet community groups have an impact on an individual's mentality. The PRC monitors people's virtual behaviors and examines their activity (3). According to this research, a person might become emphasized because they now have permission to do everything they need, and the emotional reactions and diversion are so extreme that they don't care about time.

According to research conducted by the University of California, innovation decreases an individual's attentiveness and impact on attention (4). It is difficult for certain people to concentrate solely on a single item for a greater duration of time due to behaviors for example checking Instagram again and again. In basic terms, technology-induced concentration in multiple ways is another sign that students are underperforming in instruction. Humankind will not evolve, hence violations will continue in the coming years. All are available on the digital platforms in the future, which will be exploited by cyber-terrorism. Computer hackers will be able to strike in innovative ways since anonymity will be reduced to a minimum.

The paper is as follows in the next section we will see the related works that are related to digital wellbeing. In section 3, the differences in digital well-being is been discussed. In section 4, how the education sector is being affected by digital wellbeing is been discussed with some opportunities and challenges. In section 5, how the healthcare sector is being affected by digital wellbeing is been presented with some opportunities and challenges. In section 6, the discussion is been presented with the negative and positive effects of technology and we conclude the paper in section 7 with some conclusions.

2 Related Works

Many research has been published over the past years related to digital wellbeing such as Sarah Diefenbach (5) discussed the opportunities and problems in the time of digital technology design with practical help and theoretical. They aimed to highlight technology's responsible role as a digital well-being improvement tool, as well as provide a useful framework for diverse disciplines participating in positive technology. Gui et al. (6) discussed the challenge of digital wellness in the age of digital technologies and how to address it. They also demonstrated how the drug's adverse effects put people in dangerous situations. This article looked at how individuals' healthcare and what defines "fair" in the virtual environment are influenced by computer media. The research finds that the technical skills paradigm ignores the skills to cope with the overload of information,and it explains the concepts of "digital welfare."A survey of the literature on the ethical challenges of digital wellbeing was presented by Burr et al. (1). The review article focused mostly on significant social elements such as social development, governance, education, healthcare, etc. As a result, the conclusion symbolized some questions and made some observations on the review paper's main finding. They examined and then offered a quick review of digital healthcare, the importance of digital-related to the healthcare business, as well as main problems.Kitson et al. (7) looked at how self-transcendence experiences can be aided by technology. Implement the concepts of digital wellbeing, as well as how it links to and is occasionally caused by self-transcendence. A quick review of subjective wellbeing was also presented. Several private and fundamental factors affected the validity and negation of the digital community outreach network as a method for improving wellbeing, as well as how it impacts others and creates both undesirable and good characteristics, according to McAlaney et al. (8).

3 Differences on being digital well-being

Inequalities in digital technology relation and utilization of gender-based, occupational status, and cultural-financial symbols imply that certain organizations are much more effectively fixed than most in the utilisation of smart phones for uplifting the finest health in humankind, for example, persons' career path and survival, family and community connections. Approximately 14 % of people ages 60-65,for example, lack computer engagement or have denied attempts to estimate fundamental data and technical communication skills, compared to 4% of younger and older people. With lower levels of education, the uncertainty of digital communication diminishes swiftly on humans, and it favours the benefit of a few. When it comes to career options and income rise levels, this is correct. The poorest people in the world now have access to smart devices, which has enhanced their living situation, yet the emergence of large digital organisations with large amounts of finance has also led to high levels of wealth concentration. The usage of expensive technologies in the health area also contributes to greater inequity. While digital transformation provides opportunities for people to achieve the highest levels of digital well-being, it also puts the community at risk of greater injustices and inequalities in a variety of well-being outcomes.

If people have the correct set of abilities, they can be benefited from digital technologies. Researchers believe people must have the ability and intelligence to function in a digital environment. Only 31% of today's children have the problem-solving skills necessary for

working in a technologically advanced environment. In the digital world of function, a wide range of skills is necessary, including subjective accomplishment, information and communications technology knowledge, technician skills, etc. To fully benefit from digital devices and properly navigate the online world, interpersonal and influencing skills are primarily required. Digital Education allows people to connect their real-life and digital gadgets, as well as protect them from mental health issues caused by improper usage of digital technologies (9).

4 How education sector is affected by digital wellbeing

It is intended for educators who are interested in expanding their knowledge of digital wellness education and discovering new approaches to help their students build their digital well-being. As a result of the moral outline being serious for a digital community, opportunities have arisen. As digital citizens in an increasingly digital world, we must be aware of regulations, dangers to personal information, and how digital technology affects our mental health in the same way it affects our physical health. We've all got to know how to respond ethically in an increasingly digital world. In the sphere of education, digital well-being is extremely important. Before the digital era, information delivery among individuals was impossible, and even those who had access were unable to grasp existing information in the context (10). As a result, digital technology has become a fundamental part of our lives, providing numerous learning opportunities. From the standpoint of digital welfare, today's young people are becoming increasingly interested in the technical aspects of education. Which gives youngsters several opportunities and aids in their development. Young people, as digital natives, have the potential to be their educators. And it was discovered that teenagers are more knowledgeable about technology and are more comfortable with other aged persons.

4.1 In the sphere of education, there are several challenges that digital wellness faces

As we are in an advanced world where people utilize smart devices to connect, transmission, and gain knowledge. Educators in higher institutes have also been identified a premium on their students' digital well-being. Although an educational institution recognises the value of digital literacy for society, barely 20-25% of pupils are taught by a digitally savvy teacher. Educators' digital skills must be improved, particularly in the area of digital wellbeing. Nowadays, educational institutions are becoming more mindful of the psychological and physical effects of digital overburden on individual students. Numerous issues confront various stakeholders in the context of education from the perspective of digital wellbeing. All four groups will be discussed in this section:

1 Resistance to change: Every improvement has two sides: one that leads to progress and the other that leads to problems. Another issue confronting digital well-being is staff assimilation to tech is a topic that comes up frequently in the sphere of education. Individuals are frequently different to change, although it improves the present situation over the prior one. People can't visualize how an innovative learning plan, for example, a dialogue with an expert, can be effective. Few levels can be done to overcome these obstacles:

- Refresher benefit: Multimedia's characteristics allow the information to be more engaging and easy to allude to. This honours the achievement of learning in a shorter period.
- Transmission: Effective transmission among students helps them to get in-depth skills and embrace studying using smart devices

2 Student encouragement: The further problem is to keep our students motivated to complete the course for an extended period. Employees who do not work properly may not investigate the material, which is a regular problem. The approaches for overcoming these problems are:

- Incentive: Encouraging employees to take courses and earn certifications gives them a tangible goal.
- Attractive: Making the digital program visual and visually pleasing is one of the most powerful strategies to encourage learners. This improves the effectiveness and attraction of digital learning.

3 Learner technological skills: The e-learning of staff will influence the effectiveness of their learning environments. The value learners will gain from the program is determined by their ability to comprehend and relate with progression material. To close this gap, you can perform the following steps:

- Assist when needed: It is the educator's obligation to ensure that anytime a student has a difficulty, digital learner’s facilitators are accessible to assist them and make them feel supported in the program. Participants must have access to technical support, such as live chats, a question area, and so on.

4 Evaluating effectiveness: Another problem of e-training in determining whether or not the developer's objective is being met. If there aren't any, how can a company tell if the training application is accomplishing its goals? It's critical to know how often they implement advanced devices, but it is far more crucial to identify how well they do to improve as a result of advanced data. If employees apply the expertise and training they learned through e-learning courses in their jobs, the e-learning program has been an achievement.

5 How healthcare sector is affected by digital wellbeing

Digital prospects are an encouraging characteristic of a healthcare arrangement that affects growing controls on others in the healthcare sector. In the healthcare system, AI, telemedicine and EHRs, are instances of the digital revolution. Unfortunately, the therapeutic and healthcare sector reframes at the internal level at the stage of employing digital approaches. In current work, it is evaluated that only 7% of researchers said they had gone smart technology as related to the other 15 organizations. People have thankful for this prospect or change of advanced methodology for example smart applications. Services are delivered to the individuals at the time of any emergency or any problem. Nowadays, a person's shifting lifestyle has become a key cause of illness. Every person has easy access to food i.e. energy

but has few opportunities to spend it. Obtaining only food is not only a means of achieving it is possible to live a fit life, but it will take more work. Being fit now necessitates greater effort, which is tied to working or collecting food in some way. It became necessary to make mindful judgments regarding the job, eating, leisure, and other activities to maintain good health. In western nations, the load of health-linked diseases takes about 70% of medical aid costs, and the true cost of these resources is projected to climb significantly (11). Through medical care expenditures already stretched thin, there is a need for a different approach. The assurance of digital well-being to improve own problems and prevent or delay the onset of serious illness looks to offer a way out of a difficult situation.

5.1 Opportunities in the healthcare sector of being a digital wellbeing

There are several opportunities available in the healthcare sector which are as follows:

1. **The emergence of on-demand health care:** When we talk about on-demand, we're talking about customers who want products when they want them, whenever they want them, and wherever they happen to be. Patients rely on 'on-demand' healthcare due to their busy schedules, and the healthcare business is entering a time of digital innovation. According to recent research, over 77% of Americans own a smartphone, and four billion people rely on the internet which opens a big market for on-demand services.
2. **Medical aid using BD (Big Data):**BD is a pool of facts and figures based on a company, collected in many formats such as online transactions, financial transactions, etc. Big data appears to be an opportunity that provides a variety of services, including:
    - ***Less frequency of treatment faults:***Any inconsistencies between a person's healthcare recommendations will be detected by the software id through patient record analysis, warning health professionals and patients when a drugs error is possible.
    - ***Facilitating preventive care:*** Recurring patients, sometimes known as "frequent flyers," make up a large portion of those who visit the emergency room. Big data analysis assists us in identifying these individuals and putting in place deterrent tactics to prevent them from returning.
    - ***Correct employment:*** The prognostic examination of BD might help healthcare facilities in calculating future admission rates, allowing them to better assign staff to deal with patients. When a facility's employment is minimal, it eliminates the expense and minimises urgent care processing times.
3. **Smart wearable health enhancement:**One other aspect of digital care is that practitioners may quickly obtain suffering records or growth data from hospital devices like portable tech. In the technological environment, sufferers and physicians are highlighting preservation and control, and they are expecting their data. As a response, medical institutes have shown a vision by spending in smart devices that may give actual tracking of elevated sufferers in order to foresee the possibility of a

serious condition and health applications and wearable gadgets could save the United States' healthcare system over $7 billion every year.

4. **Artificial intelligence:** In healthcare, AI is simply a digital transformation trend. Industry firms are keen to invest millions in AI since it demonstrates the promise of medical innovation. By 2025, the market for AI-powered healthcare technologies is expected to top $34 billion, implying that this technology will influence practically every element of the sector. Patients are getting more comfortable with AI-based technology such as virtual health assistants and catboats. The benefits of AI can be seen in fields such as genomics, precision medicine, medical imaging, etc. For example, in the past, cancer patients were given cookie-cutter treatments, which resulted in a higher rate of failure. However, with AI's advanced programming, these patients now have access to individualised medicines matched to their genetic makeup and lifestyle.

5.2. Challenges in the field of healthcare

The tech transformation in medicine has the ability to enhance clinicians', clinics', and institutions' cost of treating sufferers and support them to survive fuller and better life.This part focuses on the problems that face healthcare in the digital age.

1. **Data processing:** One of the key issues in the healthcare business is data processing and analysis. The vast volume of data that hospitals, clinics, and health professionals collect contributes to the problem. It is difficult for companies to give better and more tailored treatment to patients without sophisticated AI systems that can study information or data. Another issue is the data collection and synchronisation process. Doctor visits are occurring across numerous channels as telemedicine expands, making it more difficult for health providers to update patients' health information. As a result, the healthcare business will need to provide a venue to record both in-person and virtual visits by patients.
2. **Cyber security:** This is a problem that affects practically every industry, including healthcare. Organizations should be extremely cautious about cyber risks, which can be quite costly. For example, according to IBM research, healthcare firms had the highest expenses associated with data breaches, which were three times greater than other industries. The healthcare industry's security depends on taking the necessary actions to strengthen these areas. Apart from that, IoMT adoption and industry digitization are all aiming to be an attack (12). When it comes to safety, the cause of this is IoMT technology.
3. **Technological operator involvement:**The terminal operators must be regarded when it arises to machinery to create easily accessible products and services. It's difficult to create goods that are both functional and user-friendly, such as mobile apps, a connected heart monitor, or services. This is especially importantin the clinical sector because several things will be utilized by both suffers and healthcare experts.A patient's experience can be tainted by an inconvenient or poorly

constructed IoMTdevice, for example. Furthermore, if the device's flexibility and use become problematic, medical professionals will be less likely to utilise or recommend it to other patients. The ability of technology to improve the healthcare industry will be largely determined by its overall quality.

6 Discussion

In this section, we will discuss the negative and positive effects of technology on human well being.

6.1The negative effects of technology on human well-being

We wish to encourage smart advancement employ that makes plus points implementation of its portability while reducing the negative effects of misuse. You can continue to use technology's capacity to improve your general well-being while remaining connected to the system by considering the following signs related to technology addiction. The following are some significant points to examine when it comes toadvancement and its impact on healthcare:

1. **Eye Tiredness:** When we watch a laptop screen continuously for an extended amount of time, we frequently blink our eyes. Indeed, research has revealed that eye tiredness decreases human blink frequency by 50%, implying that the tears that protect our eyes evaporate without being replaced. Apart from reading small letters on a computer, stress can be caused by cell phones and other portable gadgets. As a result, about 60% of adults in the United States have symptoms of digital eye strain, which include headaches, blurred vision, etc.
2. **Sleep Disorders:** We are so enamoured with our smartphones that many of us sleep with them. Sleep apnea is dangerous because late-night electronics use can make it difficult to sleep. Some people aren't getting enough rest. In both women and men, the National Sleep Foundation revealed a link between extensive smartphone use and increased sleep disturbances.
3. **Children's Development:** Children nowadays use mobile phones, electronics, and computers more than ever before. This results in undeveloped mental growth in children, which hurts their well-being. Instead of investing time together as with family, youngsters prefer to remain inside and stare at a device for extended periods of time.3.
4. **Inaccurate Information:** While it is now a very useful prospect to examine all of the web data and information on job alternatives and health issues, it also has a disadvantage. Individuals who lack the necessary understanding may find it difficult to navigate through the vast amount of information available. There are a plethora of online health consultation facilities accessible, although if somebody can be attentively involved in the proper guidance, theymay acquire incorrect information and so worsen the situation.

6.2. The positive effects of technology on human well-being

However, there are several positive aspects of technology are available such as:

1. **Enhance Learning:** To improve the learning experience for children, technology has been integrated into the classroom. Document cameras, Apple TVs, Smartboards, etc. are now being used in educational classes to increase collaboration and impact students in the learning process. Project-based learning opportunities have expanded as a result of improved collaboration between students and teachers, making academic instruction more meaningful and valuable.

2.Develop Future Technologies Leader: As technologies advance, technical abilities will become more valuable in the job, and their consequences on daily life will rise. Among the most significant plus points of presenting teenagers and kids to the digital world is that they will be forced to continue a number of possible, best technical services. Large digital firms like Amazon are continually adding hundreds of new positions around the world, and teaching children technical skills at a young generation might assist them in planning for a good prospect.

4. **Longer Lives:** Since the 1700s, the average life expectancy has increased by 50 years. This is largely due to advancements in medical technology, however, from stronger schools and colleges to expanded and developed agriculture techniques might be credited. Individuals have become wiser, able to imagine, develop, and generate complex issues, and their gadgets have made a major influence on how people engage with their surroundings.

7 Conclusion

In all areas, we need to adapt and enhance our thinking on digital well-being, as well as use digital gadgets and technology properly. We all know how vital technology and well-being are for human life, and not only does the community field concentrate on smart methods, but also on wellbeing. Digital well-being in medical aid is covered in this research, which involves how to implement smart technology to increase healthcare.Well-being refers to the state of being healthy and comfortable in one's surroundings. Opportunities and challenges in the healthcare and education systems for digital well-being boost an individual's knowledge by allowing them to confront problems and have a better understanding of the digital system.Although digital healthcare has both disadvantages and advantages on individual physic, they demonstrate who to prevent for better wellbeing, how to implement methods wisely. Differences in the digital conversion result in many people having lower levels of education and intelligence, as well as privileges for a select few. Finally, we'd like to point out that digital well-being is becoming increasingly crucial for the future development of human well-being, particularly in the areas of health care and education.

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