

## THE ANALYSIS OF THE TECHNOLOGICAL DEVELOPMENTS FOR THE HUMAN HEALTH ESPECIALLY FOR THE EFFECTS OF CHANGING ENVIRONMENT

<sup>1</sup>Zoltán Mándy

<sup>1-3</sup>Faculty of Health Sciences, University of Miskolc, Miskolc-Egyetemváros, Hungary  
e-mail: [m-attila@mk.u-szeged.hu](mailto:m-attila@mk.u-szeged.hu)

Received: 6<sup>th</sup> September

Accepted: 31<sup>st</sup> July

### ABSTRACT

Present paper deals with my thoughts in my mind, which can be connected with human health. In this study I show what are the main problems with all of the technological developments all around the globe. There are so many publications which discuss the main problems and they try to show the solutions, but these are the most difficult problems because the human do not want to leave comfortable solutions of their life nowadays. It is enough to mention that the uses of bicycle instead of the cars especially ever since the European Union finished the all-around development of bicycle ways in the area of and between the cities in European countries. It is important to know, that there are so many talented students in University of Miskolc, at Faculty of Healthcare, for example at Health-visitor and prevention professionals, who interested in in multi-and interdisciplinary borderlines of professionalism between science of health and law and technological science. I have to mention that this study is a begin of a new trend in this Faculty.

Keywords: soft actuator, soft exoskeleton, soft robotics, flexible hand rehabilitation

### 1. INTRODUCTION

The aim of this study to realize the significance of this topic for the researchers of the universities and academies to build into the suitable subjects to the trainee of high schools and universities. The significance of this topic nowadays are getting bigger and bigger. Ever since the elementary school from the University to give the suitable knowledge level in the given age at childhood. It is important to realize that the effects of the equipment of digital media are much more dangerous than we could consider. This theme is a borderline between technological science and psychology. The most important to isolate (as it possible) the children from the dangerous effects of social media in a certain ages. To reach this objective private schools are founded in all around the globe in different kind of level. Of course, there are so many diseases, which can be caused by the technological development, but we focused on those kinds of problems which is connected to digital informatics. The main problems are the following: Most of the everyday's digital technologies are sedentary. More extended uses of these kind of technologies promotes a more sedentary lifestyle, which is known to have negative health effects, such as contributing to: obesity, cardiovascular disease, type 2 diabetes, premature death Finding ways to take breaks from sedentary technologies may help promote a more active lifestyle [1]. In University of Miskolc at Faculty of Health Sciences there are so many talented students, who would like to analyse this theme, to help the social sphere. In the United States they have been recognized the significance of this problem and these kinds of subjects have been inserted into this kind of education, like high schools and the university. By the way I have to mention that these kinds of problems are connecting with the geological and global warming challenges. The human often intervenes in the order of the nature, which causes the meltdown. This was investigated by many researchers all around the world. At the part for the effects of the construction for the human society and health will describe the detailed process. The actual industrial revolution has brought new technologies with immense power. This was the transition to new manufacturing technologies in Europe and the United States of America, in the era from about 1760 to 1840. This has been succeeded by continued industrialisation and further technological developments in developed countries around the globe, and the impact of this technology on the environment has included the misuse and damage of our natural earth [10].

The healthcare changes seriously, because of technological developments, from anaesthetics and antibiotics to MR (Magnetic Resonance) imaging scanners and radiotherapy. The technological innovation is going to keep transforming healthcare, yet while technologies (for example: treatments, devices, social media support for healthcare, etc) will drive developments, human factors will remain one of the stable limitations of breakthroughs. [6].

The social- and technological progress could not always lead to usual well-being of people in society. „This study presents some inconsistencies of human progress, technology-driven, on physical and mental health, given by a bigger incidence of diseases and suicide in highly developed societies” [7].

The trend of healthcare is shaping up in front of our very eyes with advances in digital developments, such as Artificial Intelligence, mechatronics and nanotechnology. We have to related with the latest developments in order to be able to control technics and not another way around [8]. „The measurement of the impact of technology as a driver of health care expenditure is complex since technological effects are closely interlinked with other determinants such as income and the composition and health status of a population” [9].

## 2. THE DETAILS ABOUT THE SLEEPING PROBLEMS

Using technology too close to bedtime may cause issues with sleep [1]. This kind of effect has to do with the fact that blue light, such as the light from mobile phones, e-books, and PC-s, stimulates the human brain. The qualified people there are a new disease order means burn out syndrome. This could cause sleeping problems too, at younger ages. Especially, in special areas, as health jobs they can get sooner burn out and depression too.

Researchers of a study from 2014 found that this red light is suitable to disturb the body's natural circadian rhythm. This kind of disturbance can make it harder to fall asleep or lead to a human feeling less alert the next day. To avoid the potential impact of red light on the human brain, people could stop using electronic devices that emit red light in the hour or two before bedtime. Gentle activities to wind down with instead, such as reading a book, doing gentle stretches, or taking a bath, are alternatives [1] [2].

On the other hand in this Faculty, we focus on the effects of the children.

The Children's way of thinking is still developing and may be more sensitive to the effects of technology and its overuse than adult brains [1].

If we look at the following research, the point is on a 2018 review of various research noted the possible adverse effects of children using different technologies.

Those kinds of Children who use technology may be more likely to experience issues, for example that includes:

- 1) The low scientific performance,
- 2) the lack of attention,
- 3) the low imagination ability,
- 4) the delays in language development,
- 5) delays in social and emotional development,
- 6) the physical inactivity and obesity,
- 7) poor sleep quality level,
- 8) the social issues, such as social incompatibility and anxiety,
- 9) mentionable aggressive behaviors,
- 10) the fully addiction to these technologies,
- 11) higher Body Mass index [1]

The experiment also noted the importance of teaching children to act with these technologies in healthful ways by supervising their time using them and providing interesting alternative ways.

Further, a Trusted Source study of teenagers of 15 – 16 found that those who had high digital media use had an increased chance of developing symptoms of attention-deficit hyperactivity disorder (ADHD).

However, this does not mean that digital media causes ADHD, rather that there is an association between the two. Another research must determine what this association means [1].

The researchers of the study 2015 research Trusted Source found that technology appears to negatively affect the overall health of children and teenagers of all ages. Researchers noted the importance of parents and caregivers controlling screen time in all children.

„The American Academy of Pediatrics suggests children under 18 months old to avoid display time altogether, while 2–5-year-olds have been no more than 1 hour a day of high-quality viewing with an adult” [1].

Another problem with the children with eyes of health visitors the emotional side. A health visitor have to give personal advices to the parents of children if it needful. Ever since the development of social media there are more and more problems which are connected with the internet. A younger person a child or young adult thinks he /she had to analogise with those kinds of persons who lives their lives on internet or any kind of social platform (facebook, Twitter and etc...). Many times the younger man choose profession in cause of fashion, like influencer for example. This professionalism exists because of the social media created it. Many of young people thinks that the recommend profession on the internet suit them, but it can be a false picture for them. About the using social media can make you feel more connected to the world. But, comparing yourself to others can leave you feeling inadequate or left out [3]. The study looked at the social media use of more than 1,700 human between the ages of 19 and 32. The researchers found that those with high social media use felt more socially isolated than those, who spent less time on social media.

The previous era in 2011 cross-sectional survey Trusted Source of university students in Connecticut found that internet use was problematic for about 4% of the participants [3].

The researchers said that there might be an association between problematic internet use and depression, substance use, and aggressive behavior. They also noted that higher educated students, who, according to the researchers, tend to be heavier users of the internet, may be less aware of these problems [3]. The 2016 review Trusted Source produced mixed findings on the connection that social networks have with depression and anxiety. The evidence suggests that social network use correlates with mental illness and well-being.

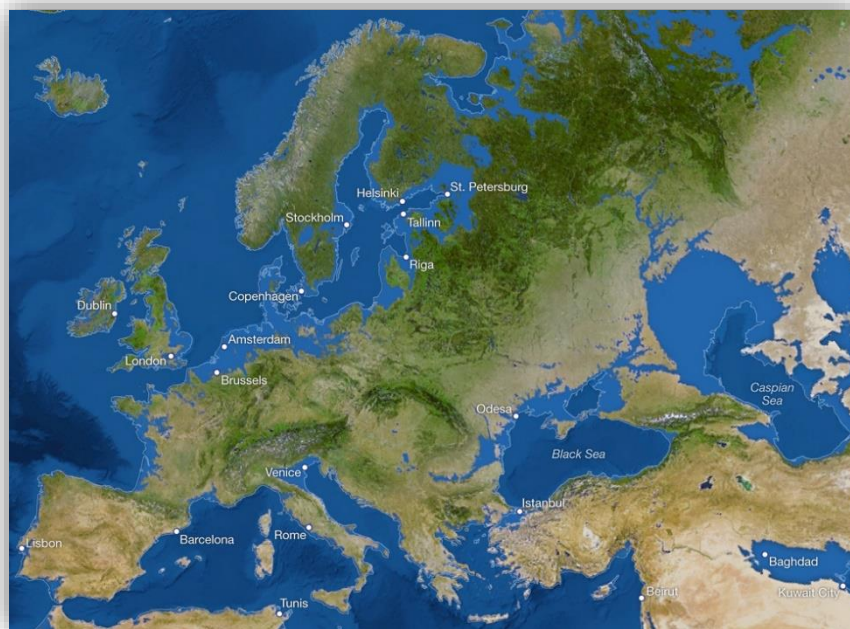
But the workers noted that whether it has a beneficial or detrimental effect depends on the quality of social factors in the social network environment.

The other research is necessary to make conclusions on cause and effect. If social media use makes you feel anxious or depressed, try cutting back to see if doing so makes a difference.

### 3. THE EFFECTS OF THE DESIGN FOR THE HUMAN SOCIETY AND HEALTH

Nowadays there are so many problems about the changing environment all around the globe. It is enough to consider the increasing level of the ocean's water which could cause could cause cataclysm in the environment in the near future, especially for certain megacities for example New York, London, Los Angeles etc. There are so many ideas from the scientists to protect the cities. These kinds of countries have to raise artificial reef to protect the capital city or other cities from the water. It could be a possible solution to avoid the problem. Another solution would be the raise of the artificial wall around the town. These are just ideas, we do not know how they operate in the practice. The following Figure 1 show that what can happen in the area of the European Union if the all of the ice –cover could melt down [5]. Consequently the human has to protect our capitals, countries with special kind of possibilities. In London, Amsterdam or Venice there are so many special kind of artificial dams around these metropolises. In the other hand the finish of the ruin of rainforest would be one of between another opportunity.

Naturally the Organisation of the United Nations and the European Union have to bring the decision to survive these kind of global cataclysm. The global warming and the raising of the ocean's water level is 2 of the biggest world's environmental problems in 21. century. The construction of artificial dams around the capitals would be the main topic at the European Plenar Parliament. For example, it is knowable from the Amsterdam's history at 16. century the dutch citizen in Netherland built up the wall from sand to protect the inner city.



*Figure 1. The expectable effects in case of the melt down at European Union [5]*

## 5. SUMMARY

I think that the technological developments, like 5G nets, social network, , internet etc. can influence the life of the society all around the globe. Another experience could be that how can the media influence the operation of human brain [4]. It is enough to consider how media commercial can change the habits of buying. The social media platform can influence the children behavensness at younger ages, and if the parents does not control them than they can become in an unsuccessful person at later. These kinds of children cannot live without the internet. They talk, chat, and messaging each other. These articles can be a warning to every kind of specialists for example teachers, psychologists, parents to control the younger generations if they experience the given signs of these kind of symptoms.

## REFERENCES

- [1]Healthline Media Company: <https://www.medicalnewstoday.com/articles/negative-effects-of-technology>
- [2] Dr. Frederick Dahlke: *Woran krankt die Welt*, 2002, Alföldi Nyomda Rt, Debrecen, ISBN 963 547 754 6,Mitől beleg a világ (in Hungarian edition)
- [3] Healthline Media Company: <https://www.healthline.com/health/negative-effects-of-technology#effects-in-kids> download: 10.07.2022
- [4] Dr. János Drábik: *Methodication of Knowledge (Tudatmódosítás:in Hungarian)*, Gold Books Publishing House, 2016.
- [5] <http://www.iflscience.com> (The curriculum of Éva Kiss-Tóth) download: 07.07.2023
- [6] J Public Health Res. 2013 Dec 1; 2(3): e28.,Published online 2013 Dec 1. doi: 10.4081/jphr.2013.e28,PMCID: PMC4147743,PMID: 25170499,Technology and the Future of Healthcare <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4147743/>
- [7] Elsevier, Mario Coccia, National Research Council of Italy (CNR) Date Written: May 31, 2021, Effects of Human Progress Driven by Technological Change on Physical and Mental Health, *STUDI DI SOCIOLOGIA*, 2021, N. 2, pp. 113-132
- [8] Bertalan Mesko: <https://medicalfuturist.com/ten-ways-technology-changing-healthcare/>
- [9] Alberto Marino and Luca Lorenzoni: Health Working Papers OECD Health Working Paper No. 113 the impact of technological advancements on health spending - a literature review [https://one.oecd.org/document/DELSA/HEA/WD/HWP\(2019\)6/En/pdf](https://one.oecd.org/document/DELSA/HEA/WD/HWP(2019)6/En/pdf)
- [10] Edinburgh Instruments Ltd. 2 Bain Square, Kirkton Campus, Livingston, The Impact of Technology on the Environment and How Environmental Technology Could Save Our Planet