

Health Dimensions of TIC, Socio-psychological Reading

A. Bensoula Nouredine¹, B. Jokha Mohammed Saleem Al-
sawafi² and C. Mariam Berkhisaa³.

Mustapha Stambouli University (Mascara),
noredline.benssoula@univ-mascara.dz¹

Sharqiyah University(Oman), juka.sawafy@gmail.com²

Mustapha stambouli University (Mascara),
mariam.berkhissaa@univ-mascara.dz³

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Abstract:

The high use of information and communication technology in human life coincided with the high proportion of chronic diseases according to various official statistics and reports, which prompted us to read these figures through scientific studies on the subject to research if there is an impact of information and communication technology on health.

We used the inductive method by viewing 14 studies and reports to reveal the relationship between the growth of diseases and the high rate of use of information and communication technology. This is confirmed by the various studies that we have seen, where figures show the impact of the use of information and communication technology on an individual's state of health both physiologically and psychologically after exposure to media content. This effect is due to the digital environment created by information and communication technology, in which new behavioral habits

have emerged, such as reducing individual mobility, and exposure to scenes of violence on social media.

Keywords: Digital environment; Health, Chronic Diseases; Physiological Diseases; Psychiatric Diseases.

المخلص: الأبعاد الصحية لتكنولوجيا الإعلام والاتصال، قراءة سوسيونفسية

نهدف من خلال هذه الورقة العلمية إلى تناول تأثير تكنولوجيا الإعلام والاتصال على صحة الإنسان الفيزيولوجية والنفسية ، حيث أن هذه التكنولوجيا ساهمت في خلق سلوكيات وعادات ساعدت على تنامي الأمراض الجسدية ، وتشجيع الكثير من الظواهر النفسية من خلال المحتوى المنشور في بيئة رقمية تختلف في نشاطاتها عن البيئة التقليدية.

إعتمدنا في هذه الورقة البحثية على المنهج الإستقرائي من خلال الإطلاع على 14 دراسة وتقرير علمي حول الموضوع ، والتي سمحت لنا بالتوصل للتأثير البالغ لتكنولوجيا الإعلام في إحداث إنحرافات جسدية ونفسية للإنسان بشكل غير مباشر من خلال العلاقة الإحصائية الطردية بين تنامي الأمراض الجسدية وبين إرتفاع نسبة إستخدام تكنولوجيا الإعلام والاتصال، وهو ما يمكن إرجاعه للتغيرات السلوكية في نشاط الإنسان بسبب هذه التكنولوجيا وتقلص حركته وهو من بين الأسباب الرئيسية في تنامي الأمراض الجسدية .

نفس الأمر بالنسبة للأمراض والإضطرابات النفسية حيث أن هذه التكنولوجيا من خلال التسويق لصور ذهنية في إتجاهات معينة تساهم في تنامي الكثير من الظواهر على غرار الإنتحار والإكتئاب ..

الكلمات المفتاحية: البيئة الرقمية، الصحة، الأمراض المزمنة،
الأمراض الفيزيولوجية، الأمراض النفسية .

Introduction

The Technological revolution of the media and communication has contributed to the establishment of a complex digital environment for young people, parents, health, and health actors. With this media environment, there have been many physiological and mental health effects, The International Telecommunication Federation report for 2018 confirmed high growth rates around the spread of ICT in various countries of the world to the point where mobile phone subscriptions outnumbered the world's population (ITU, 2018).

The number of Internet users in the world has exceeded 04.5 billion and the number of social media users has boasted 04 billion in the world In addition to the figures regarding the time and duration of an individual's handling of this technology, for example, the same report reveals that the Internet user takes approximately 07 hours per day, equivalent to 100 days per year (Erwan Sojae, 2021). (In contrast, the World Health Organization (WHO) revealed a 70% increase in diabetes between 2000 and 2019 and recorded a rise in Alzheimer's disease, which was ranked among the 10 fatal diseases during this period. The same for heart disease leading to death, where the organization recorded a terrible rise in heart disease deaths from 01 million in 2000 to 09 million in 2019 (WHO, 2020), and other figures in the same context that we can refer to through this paper.

This does not necessarily mean that information and communication technology is the main cause of the high incidence of chronic and psychiatric diseases, but refers to the relationship between the high utilization and diffusion of information and communication technology and the high level of physiological and psychological diseases affecting humans, given the changes and practices created by this

technology in parallel with other variables in the development of chronic diseases. This prompted us to examine this issue and raise the following problems:

Does the technology of communication and information affect human health?

The objective of the scientific paper:

Through this scientific paper, we aim to stimulate the role of information and communication technology in human health, which allows the guidance of various scientific research and studies in the human and social sciences or applied and medical research to address this variable (information and communication technology) as a common element of research, which shows the need for the integration of research techniques and approaches.

Methodology:

We consider the most appropriate approach to our study to be the inductive one, as it is considered to be one of the ancient scientific curricula used by the Greek scientist "Aristotle", after which scientists sought extrapolation as an important means of preparing and implementing scientific research.

The inductive curriculum had the role of the literature "Ibn Khaldoun", "Ibn al-Haitham" and his varied studies in optics, and "Jaber Ibn Hayyan", the most famous Arab chemists, as well as the Galilee world "Ibn al-Nafis."The inductive curriculum has been used in many studies of medicine and astronomy.

The induction curriculum also contributed to the development of many sciences in European countries, most notably philosophical sciences, natural sciences, medicine

and engineering, which coincided with the use of the experimental curriculum, called the "empirical induction curriculum" .

In other words, the inductive curriculum is of fundamental importance in any field of science, whether human, social, applied, or medical sciences, i.e. a specific investigation in any field focusing on a hypothesis or a set of hypotheses (Carnap, R. 19) . The study community consists of studies and scientific reports on the relationship between information technology, communication, and health. The 14 various scientific materials between studies and official reports were seen as a sample for this community.

Information, communication, and physiological health technology:

In return to the figures mentioned above, it is clear how much the human lifestyle has changed because of this technology and the environment in which it lives. The high rate of Internet and mobile phone usage is increasing in the human ambient electromagnetic waves. In a study conducted on a random sample of 375 individuals in the governorate of *Nissan, Iraq*, from 2019 to 2020 cellular phone towers ", a range of questions were asked to study personnel living near cellular towers ..

The results showed that the study members had the same illness symptoms as headaches and nausea 59%, high body temperature 61%, sleep disorder 57%, poor general activity 64%, nervous stress 60%, high blood pressure 34%, vision impairment 80%, heart problems 11%, and cases of cancer 03%. (Susan, 2020)

Likewise, from studies of concern about the trend of the impact of mobile phone waves on human health, we mention

the study of **David Pomeria** and his team at the University of Nottingham who revealed that electromagnetic waves lead to accelerated cell division, which can increase in cancer cell growth, and alerts raised by John Tattersell at the U.S. Department of Defense by exposing a section of the brain to electromagnetic waves to an experimental mouse, which through this experiment revealed the poor response of the mouse to stimuli (Omar, 2010, p. 06). There is also an inverse relationship between an individual's movement, the higher his use of these means his lack of mobility and physical activity, which is reflected in his physical and psychological health (Omar, 2010, p. 06), and here world health data indicate that lack of motor activity and obesity are risk factors for mortality. (Al Jazeera, 2023)

54% of chronic disease deaths in Mediterranean countries are caused by low-activity lifestyles that lead to the spread of cardiovascular disease, 49% in Oman, 13% in Somalia, and 28% in the United Arab Emirates. In Libya and Morocco, 41% are risk factors for diabetes, ranging from 04% in the Islamic Republic of Iran to 19% in Sudan. Hyper cholesterol ranges from 14% in Lebanon to 52% in the Islamic Republic of Iran. Data collected for adults over the age of 15 from the Territory show the highest levels of overweight in the navy, Kuwait, the United Arab Emirates, and Saudi Arabia; the prevalence of overweight (obesity) is more than 70%, especially among women. The escalating level of overweight and obesity among children is a risk; The prevalence of obesity among schoolchildren is increasing in the same vein, It is estimated that 16% of children in the United States are obese, and the causes of obesity in children are many and complex but are known to include poor eating habits, consumption of soft drinks, lack of physical exercise and excessive screen time. Between the ages of 8 and 18, young people spend more time in front of a computer screen,

TV, or video games than any other activity except for sleep (44.5 hours a week, and screen time is a time of high-calorie consumption and reduced physical activity, an ideal combination for weight gain and obesity (Jackson, L. A, 2011).

The Impact Of Information And Communication Technology On Mental Health

Studies and research indicate that there is a close correlation between media broadcasts and individuals' mental health, where one's privacy has been infiltrated, becoming an integral part of their daily interests and activities.

Adam Gazley, Professor of Neuroscience and Psychology at the California Society, commented: "We are in a cognitive and psychological crisis. There are strong indications of the negative impact of technology on our lives and our mental and psychological health, through irregular emotions and their association with an increased chance of depression and excessive stress, attention deficit disorders, difficulty concentrating, reduced productivity and physical capacity, weak social relations and empathy and several human feelings." (Khulood, 2019)

There is strong evidence that children addicted to video games, especially violent video games, have poor performance in school, more aggressive behavior, and receive negative ratings compared to children who play video games less or not. Similarly, a scientific study confirmed that children in the United States of America under the age of two spend an average of 42 minutes a day on electronic media screens. The same study confirmed a correlation between high use of social media sites and mental disorders through peer experiences on social media peer experiences where we found 01 out of 05 teenagers with diagnostic mental disorders

In addition to the rise in some cases and psychological phenomena such as social exclusion, conflict Drama and Suicide ", where young people aged 10 to 24 rose by 56% from 2007 to 2017.

This raises the premise of a link between the widespread use of new communication technology and social networking sites from childhood to adolescence. The tendency of young people and adolescents to use social media sites has contributed to the development of what can be called social passion through increased sensitivity to social information and increased motivation for rewards. With a high level of concern about development policies and direct threats, as well as intimate independence through emotional relationships, Peers constantly provide personal information publicly and feedback that can be measured immediately through comments in the form of peer bullying messages. (Nesi, J. 2020).

. In the same context, recent studies and surveys have established that the excessive content of violence in the media negatively affects people's mental health, especially young people and children, because their brains are developing. and another aspect of media violence indicates the impact of media violence on society in the context of a person's reduced efficiency due to mental health disorder, which ends up resulting in a collective economic loss to society.

A study by Bushman, B. J examined the impact of video game violence in a 20-minute video game experience played by participants. They then allowed them to watch a 10-minute video containing scenes of realistic video games, during this time. Heart rate (HR) and galvanized skin response "*GSR: A measure of changes in registered emotional arousal by binding electrodes to any part of the skin and recording*

changes in sweating from moment to moment and the related activity of the involuntary nervous system. ”

Experience has shown that participants who earlier played a violent video game had low heartbeat HR and poor emotional response GSR while viewing images of real violence, as further confirmed by the Wortella study, which concluded the effects of media violence are equivalent to the effects of Aspirin students on heart attacks (Kamel, M &, Zahid, G, 2021).

In a study conducted (Mohsen, 2020) and (Aweys, 2022) on the impact of the use of social networks on family relations between family members, The results emphasized the paucity of interaction between spouses within the family; They spend less than two hours talking and talking to each other. and each spending more than five hours per day alone on networking sites, The reasons for family problems arising from the couple's use of social media sites In the moral transgression of heterosexual intercourse, intolerance of friends' opinions on networking sites to tell friends on networking sites what happens to them in their own lives, Being concerned about the family and spending a long time on social media; The main causes of poor marital relations at the Egyptian family level. All these features provided by new technology, including social media sites, have contributed to the creation of psychological practices and disorders for individuals, particularly adolescents (Nesi, J. 2020).

Conclusion :

It is evident from the foregoing that there is a correlation between the high prevalence and use of information and communication technologies in societies and the rise of human physiological and psychological diseases. As mentioned above, This relationship, while indirect, is due to

the virtual digital environment created by it and the new means of communication, which imposes a different lifestyle than the natural traditional pattern, which requires intensification of studies and research from different social, human, applied, and medical fields.

These changes are the consequences of a modern technological boom simultaneously with a digital society that is only half a century old in the best case, while some of the media we have referred to are only 20 years old as social media sites, so the resulting secretions and changes are new in the research and scientific arena and need to be deepened and intensified.

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