Revista de Ciencias de la Comunicación e Información. 2023. Vol. 28, 174-190
ISSN 2695-5016

DIGITAL COMMUNICATION: STRATEGY IN HEALTH LITERACY

Comunicação Digital: Estratégia na literacia em Saúde Digital

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How to cite this article:

Félix-Mateus, A., & Días da Silva, L. (2023). Digital Communication: Strategy in Health Literacy. *Revista de Ciencias de la Comunicación e Información*, 28, 174-189 https://doi.org/10.35742/rcci.2023.28.e288

ABSTRACT

Introduction: This article focuses on the relevance of Digital Literacy in the field of Health and the role of Digital Communication in disease prevention and health promotion among citizens. **Methodology**: A qualitative approach was used, relying on the collection of documentary information and interviews with experts in the area (qualified informants). Moreover, real-life cases were presented to reinforce the conclusions obtained. **Results:** A concern was identified from the World Health Organization regarding the need for information and training using digital means, emphasizing mobile health. There was also a trend observed among academic and commercial institutions to prioritize the use of digital media, particularly smartphones, and the importance of 5G to facilitate connections in hard-to-reach areas. **Discussion:** The research highlights the growing importance of digital media in the field of health, especially concerning disease prevention and health promotion. The significance of 5G and smartphones is underlined, offering connection opportunities in previously inaccessible areas. **Conclusions:** The use of digital means in communication management is essential for effective Health Literacy, which in turn can significantly contribute to a better quality of life for citizens.

Keywords: Health Literacy; Digital Communication; Strategic Communication; Digital Communication Instruments; Health and Wellness Culture.

RESUMO

Introdução:O presente artigo foca-se na análise da pertinencia da Literacia Digital no campo da Saúde e o papel da Comunicação digital na prevenção de doenças e promoção da saúde junto dos cidadãos. **Metodologia:** A abordagem utilizada foi qualitativa, baseando-se em recolha de informação documental e entrevistas a especialistas da área (informadores qualificados). Além disso, apresentaram-se casos reais para reforçar as conclusões obtidas. **Resultado:** Identificou-se uma preocupação da Organização Mundial da Saúde sobre a necessidade de informação e formação usando meios digitais, com

enfoque na saúde móvel. Também se notou uma tendência de instituições académicas e comerciais em priorizar a utilização de meios digitais, especialmente o smartphone e a importância do 5G para facilitar conexões em zonas de difícil acesso. **Discussão:** A pesquisa ressalta a crescente importância dos meios digitais no campo da saúde, especialmente quando se trata de prevenir doenças e promover saúde. A relevância do 5G e do smartphone destaca-se, oferecendo oportunidades de ligação em áreas anteriormente inacessíveis. **Conclusões:** A utilização dos meios digitais na gestão da comunicação é fundamental para uma eficaz Literacia em saúde, que, por sua vez, pode contribuir significativamente para uma melhor qualidade de vida dos cidadãos**.**

Palavras-chave: Literacia em Saúde; Comunicação Digital; Comunicação Estratégica; Instrumentos Digitais de Comunicação; Cultura de Saúde e Bem-estar.

1. INTRODUCTION

Within the scope of Health Sciences, the concept of Literacy has stood out due to the increasing concern with this condition. On the other hand, the evolution of the Communication concept, combined with the value of digital tools, has more than ever transformed the role of the citizen from a mere spectator to a participant in the communication process and an actor in related situations. The field of Health could be one of the most privileged with the use of Digital means, both in the treatment and prevention of diseases, and in contributing to the Health and Well-being of individuals. The present introduction aims to address the core of the object being discussed here in order to contribute to the clarification of some intrinsic factors in the corresponding dynamics, and to understand aspects that are naturally still not deeply explored due to the relative novelty of the condition.

In subsequent chapters, we will attempt to address concerns and reflections that already exist among interested parties and scholars of the dynamics. Simultaneously, we will explore situations that could enhance future developments in both the research field and the empirical application of the areas covered. Additionally, we will analyze situations that already today enjoy the benefits of using digital means in the field of health. The intervening role of the World Health Organization in different continents for the promotion of health and well-being and disease prevention in populations is emphasized.

1.1. Literacy: what it consists of and how it operates

OThe concept of Literacy can be understood as a natural evolution in the educational context of the ability to read and write. Both refer to human capacities related to reading and writing. However, literacy does not directly and necessarily reflect the level of schooling to which literacy is traditionally confined. This means that the same level of literacy acquired by different individuals will not necessarily equate to the same level of the ability to read and write developed by each of them. While the ability to learn to read and write reflects the act of "teaching and learning," the concept of literacy translates into the ability of people to use the acquired reading, writing, and calculation skills. Thus, this capacity escapes dichotomous categorizations, such as "illiterate" and "literate" (Benavente & Rosa, 1995).

Understanding different levels of literacy leads to abandoning the rigidity implicit in the traditional concept of "literacy." According to Benavente & Rosa: "[in literacy], it is not about knowing what people have learned or not, but rather about knowing what people

are capable of using in life situations. Literacy is thus defined as the ability to process written information in everyday life" (1995, p. 23).

At the international level, in 2002, the Organisation for Economic Co-operation and Development (OECD) defined literacy as "the ability to understand, use, and reflect on texts to achieve a goal, develop knowledge, and individual potential to participate/act in society." It should be noted that this concept may fall short in the apparent and immediate interpretation of a relatively passive citizen in the process. Even when considering Communication within it, an intervening and participatory position is not highlighted, a reality of today that increasingly needs to be clarified and enhanced for a minimally informed degree of literacy in society. Mateus and Silva, at a time when an active position of the citizen provided by digital means is valued, emphasize the need to understand their intentions and options derived from the means they choose for their participation in society (2023).

Almost a decade ago, in 2014, we expressed our understanding at the international level about the great need for interaction and cooperation, then among scientists, regardless of where they were located, and the great added value provided by the use of ICT for knowledge sharing and scientific creation: "one of the great benefits of the development of new information and communication technologies (ICTs) is reflected in the dissemination of science and interaction among scientists from different scientific units, often quite geographically distant, which also allows for common and shared achievements between different centers and countries, hitherto conditioned by distance and the impossibility of such easy and direct contact" (Mateus, 2014, p. 592).

This was a concern, now extended to all elements of the communicative process, when the power of the citizen in general was observed, obtained through communicative relationships, particularly of a digital nature. In the same vein, it is evident that communication and communicative skills are vital to increase literacy levels in any area. Therefore, it is essential to align technology and the digital realm with the literacy concept, as the use of these means is of great responsibility for the effectiveness of the process as a whole. It is on this basis that the concept of Digital Literacy is imposed.

1.2. Digital Literacy and Communication

While the term "literacy," on its own, generally refers to reading and writing skills, as mentioned above, when complemented with the adjective "digital," the concept is greatly expanded. It was coined by Paul Gilster and first published by the author in his book of the same name, "Digital Literacy," in February 1997, although references to it date back to his previously published virtual work in 1949. Gilster's ideas, when applied to the educational universe, can be summarized by the "teach to learn" formula (Belloni, 2003, p. 82). According to the author, digital literacy is the logical extension of literacy, recurring with technological and social changes over time, and means "the ability to understand and use digital information" (Gilster, 1997, p. 2). Essentially, the concept stems from the notion of literacy that has been present in education for many years but needed to be applied to the digital world after the technological boom experienced by society. It is worth noting that in most translations into the Portuguese language, the term is referred to as "digital literacy," which does not correspond to the concept being discussed here, as previously demonstrated: digital literacy involves not only the ability to read and write, now through tangible digital technologies such as smartphones and computers, but also

the use of intangible technological resources, where the internet itself stands out as fundamental, hosting operating systems, virtual applications, communication networks, and the like.

In the 21st century, the European Commission, in the context of its Working Reports (2008), defines digital literacy as:
"the skills needed to achieve digital competence, supported by basic knowledge of ICT and the use of computers, aiming to retrieve, assess, store, produce, present, and exchange information, as well as to communicate and participate in collaborative networks via the Internet" (p. 4, personal translation).

This realization stems from the experience in a world that practically lives more online than in real life, as technology is so present and ingrained that daily life is no longer conceivable without its use. In this sequence, one easily concludes the importance of digital literacy for the development of communication skills and the improvement of interpersonal relationships, so necessary for life in society. One of the main areas responsible in this regard is precisely Communication. However, in the corresponding literature, often even by specialists and in the context of scientific essays, we find various references to aspects like Information, Promotion, Motivation, but they do not encompass the Communication Strategy: Information and Communication are used indiscriminately, with coinciding meanings. Thus approached, the concept of Communication is limited in its real value and capacity within society. What characterizes it is precisely the two-way communicative process, offered by the possibility of implicit feedback in the act of Communicating. This leads to understanding the will of the citizen as an active and intervening participant in society.

Since then, communication related to health has been developing and being put at the service of citizens using a variety of channels, notably digital ones. Discussing the opportunity, importance, and responsibility of 4G or 5G Digital Communication, using smartphones or other digital instruments in specific situations related to the present work, is something we will address in a separate chapter presented ahead.

1.3. Health Literacy

The World Health Organization (WHO) defines Health Literacy as the set of "cognitive and social skills and the capacity of an individual to access, understand, and use information in a way to promote and maintain good health" (Lopes & Almeida, 2019, p. 17).

Miguel Arriaga, Coordinator at the Directorate-General of Health in Portugal and a researcher, presents some aspects of the framework of literacy in the health domain:

The promotion of Health Literacy is primarily related to the development of personal skills, aiming at the control each person has over their health, as well as increasing their ability to seek information and take responsibility (Arriaga in Lopes & Almeida, 2019, pp. 11-12). He concludes that this "contributes (...) to an increase in well-being and quality of life" (idem, idem, ibidem). According to the same author, for this to happen:

it is important to create and adapt a strategic plan that allows for an investment in promoting literacy in populations, as well as in healthcare professionals, thus enabling a

consistent and comprehensive approach that incorporates literacy into health systems and policies, since motivated and confident individuals in their ability to use their knowledge and skills are more likely to be active participants in maintaining and improving their health (Smith et al., 2013, p. 12).

Within the perspective of literacy, this underscores the need for an active relationship between healthcare professionals and people in society, more towards disease prevention than the treatment of existing health problems. To achieve this, the author argues that "Health professionals play a central role as promoters and activators of Health Literacy, in their different intervention and interaction contexts: healthcare professional-person and healthcare professional-population" (Arriaga, op. cit., p. 13).

Among the responsibilities assigned to healthcare professionals, particular emphasis is placed on the need to "Simplify communication and ensure understanding to mitigate the risk of communication failures" (Arriaga, op. cit., p. 13).

It is worth noting that the need to establish a connection between communication and health has been drawing the attention of professionals in these two areas, especially since, from the second half of the 20th century, a new paradigm proposed a shift from disease to health, aiming for its promotion and prevention, using various communicative actions as an indispensable tool to achieve this goal (Bertol, in Mateus, 2015, p. 179).

In this sense, and to optimize the communicational relationship and participation of the individuals they interact with,

the healthcare professional should, in their interaction with the individual, use accessible, assertive, clear, and positive language; be highly engaged; promote a therapeutic relationship; have control over the message; be a source of reliable and trustworthy information and assert themselves as a dynamic and proactive communicative hub (Arriaga, op. cit., p. 14).

1.4. Digital Communication in Health Literacy

Digital Communication is the communicational expression derived from the Internet - web 2.0 - or that uses it as a platform for operation. It is directly related to the internet and digital social networks and encompasses a new concept of communication based on interaction. Unlike the traditional communication process, it works dialectically, allowing interaction between senders and receivers (...). The technological evolution of the internet, around 2004, brought about a change from the previous passive role of a mere 'navigator' to a new active and participatory role of a 'user' (Mateus, 2014, p. 592).

In parallel with this evolution, health-related communication has been developing to better serve citizens using a variety of channels, particularly digital ones: "In recent decades, the internet has become a channel associated with traditional mass media and can be used as an effective platform for the dissemination of health-related content (Cassell et al., 1998; Jacobs et al., 2017, in Silva et al., 2020)". This is the conclusion of a recent study conducted by researchers from the School of Media and Communication in Lisbon, presenting the reality of Portugal: "(...) some organizations have invested in the creation of digital applications, such as the National Health System, which on its website (www.sns.gov.pt) offers applications such as "My SNS Tempos", which allows checking

the average waiting time in the emergency departments of each health institution, and "My SNS Carteira", which enables consulting treatment guides, vaccination booklet, living will, allergy and rare disease registration card, physical activity, and glycemia" (Silva et al., 2020).

It is worth noting that for the promotion of healthy behaviors, access to information is a necessary but not sufficient element. This position does not yet consider the need for an active role on the part of the citizen, as mentioned in section 1.3. For this, the willingness to act is also necessary, a motivation that needs to be triggered among citizens. It is a matter of creating and developing a "health culture" in society by changing the mindset of individuals. The paradigm shift prioritizing health over disease treatment must be induced by changing people's mindset. It is with this same foundation that: "the individual should also be able to develop other abilities, such as seeking medical help, understanding professional guidance, describing and communicating physical and mental symptoms, making decisions about clinical treatments, understanding instructions and prescriptions, and giving informed consent" (Carmo, 2016, in Silva et al., 2020).

To achieve this, communication must be seen as a process that facilitates this posture by citizens. This is the significant contribution of digital communication to the development of health literacy, contributing to a more enlightened, motivated, and interventionist society regarding not only disease but primarily how to prevent and avoid it, focusing on the Culture of Health desired in modern societies for which the use of digital means and tools facilitates the entire process, becoming fundamental in creating such a model.

2. OBJECTIVES

The speed at which the world is changing today due to constant technological advancements leads us to a permanent analysis of our surroundings. The field of Health is one of the areas that has been benefiting the most from the application of the digital component, both in disease prevention and treatment. The dissemination of digital connection is urgent as a facilitating means in problematic and limiting situations, whether geographically or financially. The paradigm shift from disease treatment to its prevention, as well as the promotion of well-being, has led different continents to be concerned about how to address this issue. "Health education" translates into one of the main concerns of health literacy, and digital communication proves to be a fundamental support tool for the knowledge it provides. Our purpose with this work is to contribute to the clarification of new paradigms in health sciences by disseminating the currently used methods and the advantages that digitally-based communication can bring to the construction of a society focused on the health and well-being of citizens, contributing to a better quality of life for people.

3. METHODOLOGY

The methodology used for this article was exclusively based on qualitative information gathering and involved two distinct phases. The first phase aimed to provide a general overview of the aspects to be reflected upon and introduce them in the context they are addressed, within the scientific realm. It was crucial to clarify any inaccuracies in the practical use of concepts related to Communication, such as Literacy and Literacy. Additionally, it was deemed essential to immediately present the direct relationship between basic concepts in the theme under discussion, particularly what is understood by Health Literacy in this field. The responsibility of Communication for the intended

effectiveness in this field was emphasized, focusing on the aspects that characterize Digital Communication in situations where face-to-face Communication is not possible, as in many health-related situations discussed in this context. To ensure a clear understanding of these concepts in the article's context and their relationship with the presented cases, it was decided to present this dialectic at the beginning of this work within the Introduction.

In the second phase, real cases related to the topic at hand were presented. Official information from the Ministry of Health, related to the WHO, the Statutes, and informative documentation from CBS, was consulted. Direct interviews were conducted with the director of CBS, who is a co-author of this article and provided direct collaboration and knowledge regarding the institution. Direct, in-person, and participatory observation of the "5G Health Conference" was also carried out, along with an analysis of documents related to the event.

4. DISCUSSION

The accounts and considerations about the cases presented below arise from the concepts and clarifications introduced in section 1 of this work (Introduction). There, the foundations for a better understanding of the initiatives now presented can be found.

Trends and Realities in the Application of Digital Means for the Positive Development of the Healthcare Sector - WHO and the Approach of Continents

The use of digital means is of significant relevance today, both in practical application and research, to facilitate the lives of citizens in the context we are discussing: coping with illness and also in its prevention.

World Health Day, celebrated every year on April 7, marks the anniversary of the founding of the WHO in 1948 and each year focuses on a specific public health concern. In addition to focusing on the journey to achieve Health for All, which is the theme for the current year of 2023, the WHO is celebrating its 75th anniversary under the theme "75 years of improving public health" (Ministry of Health, 2023).

The need to share knowledge in societies that did not have adequate means is a concern that did not start with the privilege of communication through digital media. However, it is a reality that has been keenly felt in its absence and can be enabled and even enhanced when other forms and means do not allow the desired effectiveness.

The African Continent

The World Health Organization (WHO) and the political conception of digital health for Africa

Very recently, between June 22 and 24 of this year (2023), a Workshop took place in Mozambique at the Polana Hotel, where the analysis of the results obtained with the Survey for the political conception of digital health (Misau/WHO) was conducted. The state of the art of mobile health was evaluated there. Based on the results obtained and as a consequence of the findings, the global strategy for the implementation of digital health for the African Region of WHO was designed.

It is worth mentioning that since 2005, the World Health Assembly adopted a series of resolutions (WHA58.28, WHA66.26, and WHA71.7) aimed at encouraging Member States to develop and implement digital health strategies to contribute to the achievement of Sustainable Development Goals (SDGs) and Universal Health Coverage (UHC) (UN News, 2019).

The Regional Committee for Africa also adopted a resolution to advance digital health solutions in the African Region (AFR/RC60/R3) (WHO, 2020).

Despite this, in 2019, most Member States in the African Region were still using digital health solutions on an experimental basis. The results were not very effective, highlighting "the low level of involvement of healthcare professionals in digital health" as seen in the analysis of the mentioned report (AFR/RC60/R3).

In an attempt to overcome these constraints in 2020, WHO adopted a global strategy for digital health transformation with the aim of promoting the advancement of digital health technologies and their application to realize the vision of "health for all" defined in SDG 3.[1], as well as other sustainable development goals related to health. The strategy encourages international collaboration and support for Member States in digital health at the national level.

Between August 24 and 26, 2021, the WHO in the African Region developed a framework, [2], the AFR/RC71/10[3], to guide the implementation of the global strategy in the Member States, which began to be used. It was based on the results obtained with its application that the recent policy conception of digital health (Misau/WHO) was made, which we initially referred to.

The Responsibility of the Academic Environment in Health Education - CBS

The CBS (Corporate Business School), established in 2010 in Maputo by one of the authors of this article, Lourenço Dias da Silva, presents itself as a noteworthy case in Mozambique due to its early adoption of the distance learning concept, aiming to create and disseminate knowledge more widely in the country. The author explains his project in the first person:

"With my return to Mozambique after completing my doctorate in Lisbon at ISCTE in late 2009, along with other international experiences gained, I felt the responsibility to contribute to the increase of knowledge in our country. This led to the creation of CBS in 2012 in Maputo, where we defined a method of relocation to share knowledge more effectively and establish privileged connectivity with students. We achieved this by bringing specialized teachers, particularly from Portugal and Brazil, to our school, and also by utilizing digital means through computers with Skype for communication, thus containing costs. However, over time, we realized the long-term viability of the project was limited due to unavailability of teachers and financial constraints in negotiating their travels. This realization coincided with the boom in digital technology, prompting us to

[1] UN goal to ensure a healthy life and promote well-being for all at all ages by 2030.

[2] Framework for the implementation of the global strategy on digital health in the African region of WHO.

[3] AFR-RC71-10 Framework for the implementation of the global strategy on digital health in the African Region of WHO.pdf (who.int).

update the project where smartphones would become the center for communication and knowledge transmission in a society that still relies on external assistance for knowledge absorption and dissemination, as well as for experiencing new relationships that allow them to enter the world of innovation and development. This aspect is generally considered the result of experiences and knowledge acquired over the years, with education always being its fundamental purpose." (Dias da Silva, 2012)

The maturation of this concept in the context of new technologies and digital media, with the introduction of 4G and 5G, also in the field of education, opens up the possibility of distance education that emphasizes "the use of smartphones as a means of communication for non-face-to-face work" (Mateus, 2022, p. 2). The extensive development of digital technology allows for a much more ambitious application beyond the confines of traditional classrooms, based on what has been learned during this trial period, utilizing means with enhanced potential obtained through the natural expansion of digital communication in terms of knowledge, resources, and tools. Hence, health literacy is closely related, as its foundation lies in education and involves citizen participation through the use of suitable digital media for various situations, considering the literacy levels of defined targets, their geographical constraints, and many other factors. The foundation is there: to enhance literacy, depending on the location and specific objectives, the means must be adapted to the locations and many other specific factors that are part of the diverse cultures of the respective targets.

Within the scope of digital technology, we emphasize the opportunity provided by smartphones as a highly current means and instrument, whose working capacity can be defined and enhanced according to the objectives of the moment: economic, social, and environmental. The concept of Relocation advocated by Dias da Silva in 2012 appears irreversible: the choice to use such equipment is justified by the cybersecurity it offers, its connectivity capabilities, serving as a Hub point (a common connection point for various devices - computers, printers, tablets - on a local network), and its capacity for virtual Relocation. (Dias da Silva, 2012)

According to the author, the Conceptual Framework he has advocated since 2012 and refined in 2022 can be succinctly summarized in the following model:

Chair - 4G, 5G, and Sustainability – Relocation
Smartphoneization or Smartphone Globalization | Connectivity.

Here's a brief explanation:

The Relocation offered by 5G brings impactful changes to the realization of the attractiveness of Exchange Value, established through Connectivity using smartphones (Dias da Silva, 2022).

The model created by the author has attracted attention from the Government of Mozambique. Official recognition came explicitly through a letter from the President of the Assembly of the Republic, Esperança Laurinda Bias, as a tribute to the work of Professor Lourenço Silva in 2021[4].

[4] Oficio 277-GPAR-2021

Throughout 2023, the use of digital means and tools for presenting and discussing various topics has led authors with different vocations to share experiences and project knowledge through the CBS in Maputo. Here are some webinars promoted via Zoom by the Corporate Business School with their participation, addressing very current realities:

- April 13, 2023 – Tiago Carrazedo – Consultant and Finance Lecturer at ISCTE-INDEG-(Portugal), executive training: "Investment Project Analysis: guidelines and technical tools"
- May 3, 2023 – Nuno Nogueira - Economist; Consultant: "Advantages and Challenges of 5G"
- May 18, 2023 – Anderson Costa. Professor at the National School of Public Administration - ENAP (Brazil); Strategist and Consultant in Digital Transformation of Public Organizations: "From Data to Decisions: smartphoneization is changing how organizations use data to make decisions"
- June 16, 2023 – Carlos Duarte – Full Professor - Production Engineering, lecturer at IADE - Universidade Europeia: "Trends in Technological Evolution, increasing complexity - ease of use – Smartphoneization, Smartphone globalization"
- June 23, 2023 – Mário Silva – Graduate and Master's degree from the Faculty of Law of the University of Lisbon; Advisor: Court of Auditors, General Inspectorate of Finance, Ministry of the Environment, others. "Ethics in Public Administration – from origins to current practices"
- July 5, 2023 – Rui Pedro Nobre Ribeiro – PhD from ISCTE and lecturer at Universidade Lusófona in Lisbon - "Digital Transformation: thinking and doing"

Health through the Smartphone – Recognition by the Medical Community

The initiative was officially recognized by educational partners in Mozambique, notably by experts in the healthcare field. In a statement titled "Reflections on the use of the smartphone" sent to the Director of CBS, dated October 13, 2021, and now part of the school's documentary heritage.[5], Professor Mamudo Rafik Ismail, MD.[6], Mamudo Rafik Ismail MD, PhD (Professor Associado) from the Faculty of Medicine at Eduardo Mondlane University, shares his thoughts on the relevance of digital means, specifically smartphones, for Science. Here are representative excerpts from his position, as presented in the communication sent on the aforementioned date:

"The smartphone has become accessible to many and will contribute to the universality of science, the cultural heritage of peoples, greater socialization, and humanization in the concept of 'far but close and [in] every place, timeless' (...) It helps to reduce regional asymmetries, in favor of equity for low-income countries worldwide." (Mamudo, 2021, p. 1)

According to Professor Mamudo, the smartphone has the following functions: "communicating, educating, training, informing, entertaining, socializing, overcoming the

[5]Provided for analysis by the CBS Library Archive.

[6] Mamudo Rafik Ismail MD, PhD (Associate Professor) / Faculty of Medicine, UEM; Anatomical Pathologist Doctor, President of the College of Pathological Anatomy / OrM.

barrier of time and space, with lectures synchronously or asynchronously; managing our health, projects, managing our own emotions" (Mamudo, 2021, p. 1).

It's important to highlight his conclusion, which serves as a warning regarding the use of the instrument by the general citizen, who might not have the knowledge provided by medical science and its accredited specialists. The Professor states: "(...) how many 'Doctor Google' patients appear in medical offices with a diagnosis already made based on the interpretation of complaints or ailments, signs or symptoms, as if Medicine were practiced by pressing keys on a computer or smartphone?" (Mamudo, 2021, p. 1).

In Europe

Online health (e-Saúde)

In the European context, as early as 2018, the European Commission presented a report, based on scientifically grounded analyses, to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of the Regions on enabling the digital transformation of health and care services in the Digital Single Market, empowering citizens, and building a healthier society, referred to as eHealth: Digital Health and Care. (EUR-Lex - 52018DC0233-PT). It stated that:

Digital solutions for health and care could improve the well-being of millions of citizens and radically change the way health and care services are provided to patients (...). Digitalization can support the continuity of care across borders (...); digitalization can also help promote health and prevent diseases, especially in the workplace; (...) it can support the reform of healthcare systems and their transition to new people-centered care models and enable the transition from hospital-centered systems to more integrated and community-focused care structures. Digital tools can turn scientific knowledge into a means to help citizens stay healthy, thus ensuring they do not get sick. (Mamudo, 2021, p. 1)

In summary, it referred to prevention, diagnosis, treatment, monitoring, and management of health-related issues, as well as monitoring and managing lifestyle habits with an impact on health: "Digital health and care are innovative and can improve access to and the quality of care and increase the overall efficiency of the healthcare sector" (Mateus, 2021).

Although previously used, home office and telecommuting found significant opportunities for application due to the constraints of COVID-19, a disease caused by the SARS-CoV-2 virus in 2019:

On March 11, 2020, the WHO characterized the new coronavirus outbreak as a pandemic and urged governments worldwide to take the situation seriously and prepare for the first wave of the public health emergency with various drastic measures, including national-scale lockdowns that occurred in many countries. (WHO, 2020, in Mateus, 2022, p. 4).

Recalling this recent period and everything that was experienced helps illustrate the condition we are focusing on for the next reality it leads us to. But it also helps emphasize the importance of the alternative relationship not much contemplated up to that moment, particularly in Portuguese society, which always prioritized direct and in-person relationships, even in work, as a guarantee of trust between people. Typically equated, the concepts of "home office" and "telecommuting" found significant opportunities for application due to the subsequent need to contain gatherings of people. But let's clarify that the meanings of the terms do not always coincide. The term "home office," commonly used, only refers to the state of remote work, work not done within the company or

institution's premises. On the other hand, the concept of telecommuting includes how the work is done: "in a place distant from the office and/or production center, allowing physical separation and the use of facilitating communication technologies" (Lizote, 2021, in Mateus, 2022, p. 4), with the most common means being the internet: "Internal digital communication, which previously played an important role in the company's strategy, has become fundamental" (Mateus, 2021, p. 121). Telecommuting depends on digital tools, and today everything is done through smartphones, apps, software, and systems that optimize processes considered complex and have replaced face-to-face communication:
The use of apps through smartphones proves to be ideal for companies when services are decentralized, sometimes with limited internet access, through the use of mobile data, and when, for any other reason, using computers is complex for many of the company's employees. (Mateus, 2021, p. 123)

The social role of technology in health - NOS Conference

At the time of conducting this work, an international conference sponsored by the telecommunications company NOS SGPS (Sociedades Gestoras de Participações Sociais) is taking place in Xabregas, Lisbon, Portugal, titled "The 5G Health Conference," which we had the privilege of attending in person. NOS is a Portuguese communications and entertainment group established in 2013 through the merger of other major communication companies in the country. It offers state-of-the-art fixed and mobile solutions, television, internet, voice, and data for all market segments (personal, residential, and business). In 2019, it became responsible for the first NOS 5G Fund in the country. It is characterized by being the first company to implement 5G technology in various equipment and services.

Our participation in this event allows us to share some of the contributions reported in this work. Real cases of the use of digital means in the field of health were presented, as well as studies aimed at further enabling these means to simplify and expedite care for citizens, often geographically distant from central locations where medical, health, and well-being assistance is difficult to provide in terms of continuity or even emergency. Technological solutions that support the redesign of operations, contact with patients, collaboration among healthcare professionals, greater process efficiency, leveraging the potential of data, and many other issues were also addressed. 5G was highlighted as a catalyst for various technologies, bringing security, resilience, performance, and low latency to interactions between solutions and networks.

According to João Ricardo Moreira[7]The project presented by NOS demonstrated current solutions and future ambitions with great viability for short-term realization through the continuous development of science in the provision of digital means for the treatment and prevention of diseases, with an emphasis on health education through information, continuous albeit virtual monitoring, and guidance for treatment when needed.

5. CONCLUSIONS

Based on the readings and analysis of the cases presented, we have identified the benefits derived from the use of digital technologies in both the treatment and prevention of

[7] 1st Board Member Nos Comunicações

diseases, as well as the promotion of health and well-being in individuals.

Literacy is reflected in the knowledge acquired by individuals and enables them to use it in correspondence with their needs. When the subject is health, literacy becomes a weapon against disease, at least in terms of prevention, and also a way to preserve it through the behaviors of citizens learned in that context. Health literacy is part of everyone's education and influences their decisions based on various internal or external aspects beyond their exclusive motivation.

At the foundation of health literacy, the development of Information and Communication Technologies (ICT) allows for the dissemination of science and interaction among people with the aim of improving their quality of life. In the context of health, these relationships can involve discussions among various scientists for the advancement of science or between specialists and their patients for personalized support for their vulnerabilities.

When we talk about digital communication and digital literacy, we are in the era of 4G and 5G, which we are currently experiencing (depending on the location). These technologies enable direct, immediate, and simultaneous connection between geographically distant elements. This is a significant asset for the update and support of countries with different levels of development or accessibility, allowing them to witness the latest innovations and benefit from them through digital technologies. This encompasses actions and knowledge that can contribute to an improved quality of life for citizens, regardless of their location.

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CONTRIBUTIONS OF AUTHORS, FUNDING, AND ACKNOWLEDGMENTS

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and Editing.: Félix-Mateus, A. y Días da Silva, L. **Visualization**: Félix-Mateus, A. y Días da Silva, L. **Supervision** Félix-Mateus, A. y Días da Silva, L. **Projec Management**: Félix-Mateus, A. y Días da Silva, L. **The authors have read and accepted the published version of the manuscript.:** Félix-Mateus, A.and Días da Silva, L.

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