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RESEARCH ARTICLE

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E-HEALTH LITERACY: AN URGENT NEED OF DEVELOPING COUNTRIES

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ABSTRACT

In today's world, digital technology has become a necessity for everyone. Whether in the health sector or any other field, the use of the internet is on the rise. The concept of electronic health (E-health) has become essential in today's digital health landscape. It offers various virtual opportunities to improve the quality of care and provide evidence-based health services. Health literacy is an important factor for the communities to develop and thrive. The recent advent of Covid-19 pandemic has highlighted the need for e-health literacy, especially given the widespread misinformation and fake news proliferating through social media. There are numerous challenges associated with low e-health literacy among the masses. In a country like India which has a population of more than 1.4 Billion and significant internet penetration, appropriate usage of internet technology has become the need of the hour particularly in the healthcare sector. Therefore, it becomes of utmost priority to develop and enhance the public health sector on an urgent basis. E-health has the potential to revolutionize the way health information is being provided considering the needs and preferences of the low-health literate population. Training and skills need to be imparted to the frontline healthcare workers to further educate and aware the masses about the basic skills required to utilize the digital health ecosystem at the grassroots level.

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INTRODUCTION

With the advent of internet technology, the traditional health care delivery model has started to shift towards electronic health care delivery systems. The concept of electronic-health is becoming a crucial part of the contemporary media health environment. E-health is defined by the World Health organization (WHO), as the use of information, communication and technology (ICT) for health. Thus it is the delivery of health services and information about health issues through digital technologies (Eysenbach, 2001). It provides numerous virtual opportunities to advance enhanced quality of care and evidence based health services. It has surpassed the geographical boundaries with the introduction of telemedicine in health care. E-health has provided a set of tools in the shape of new models, devices, applications and services to improve user's health. To utilize the full potential of such services, health literacy and more advanced electronic-health literacy has become the need of the hour.

E-health Literacy: To make appropriate health related decisions, a person should be able to understand, communicate and process health related information defined as health literacy (Centre for Disease Control and Prevention, 2019). People can fully utilize health services and information, only when they obtain and understand correct health related information in the form of brochures, pamphlets, medical instructions, advertisements and doctor's prescription etc.

Health literacy is an important determinant for the communities to develop and prosper. It helps in mobilising the communities towards better health care decisions and empowering them against emerging dangers like epidemics, emergencies, contagious and non-contagious diseases (Kumar, 2019). With the growth in internet technology, electronic health literacy has come out as a more advanced concept. E-health literacy has been defined by Norman and Skinner (2006), as the ability to find, obtain, process and understand quality health information from electronic sources and online platforms and then apply knowledge skills gained to solve health problems and address health related issues. It is a set of skills an individual must possess in order to better utilize the full potential of the online information and services in the digital health arena. Unlike the concept of literacy, e-health literacy advocates for more than just reading and writing ability, a person needs to have basic working knowledge of computers, the understanding of science and technology, how the internet processes information and how the consumers receive that information.

Importance of E-health literacy: Online health information is being regarded as credible and thus the internet sources are considered to be important and reliable by the people in today's digital world (Valizadeh-Haghi & Rahmatizadeh, 2018; Maden & Fox, 2006). Google search engine, Yahoo, World Wide Web, other technology based platforms, Artificial intelligence, data and network analysis and

many applications have become the part and parcel of public health in the current health environment. There are a number of websites and devices available services, cyberdocs, electronic health data storage and much more. In this new public health setting, conventional face to face consultation with physicians and health professionals has become secondary as people are relying more on online platforms and digital sources for health information on primary basis (Valizadeh-Haghi & Rahmatizadeh, 2018). E-health strategies have been proved to be more interactive and engaging than the routine traditional ones. They actively engage consumers and enhance learning by giving tailored health information (Mackert, Champlin, Holton, Munoz and Damasio, 2014).

Problems associated with low E-health literacy: Social media platforms have emerged as an information and communication ecosystem. They have the capacity to create an open space for virtual interactions, dialogues and content consumption. In the medical environment, social media is acting as an important tool for the free flow of health information among people. These interactive online media platforms are flooded with a surplus amount of information, misinformation, misapprehension, disinformation and fake news (Chou, Oh & Klein, 2018). For the active users of the internet, social media has created a situation of filter bubbles. This state of online seclusion in terms of content is curated algorithmically. Algorithms select the information a user will receive driven by personal biases and user's digital traces (Sutton, 2018). These filter algorithms or recommender algorithms ensure by keeping a constant vigilance on user's past- click- behaviour that users receive only those news and information which are important to them by filtering out less relevant content (Haim, Graefe & Brosius, 2017). It reduces the diversity of information and narrows down the scope of knowledge for the users thus, leading to digital destruction. A study conducted by Broniatowski (2018), suggested with evidence that how Russian bots, trolls and cyborgs acting as malicious actors, are hampering the flow of information about vaccines and creating havoc by promoting false content and anti-vaccine beliefs. These automated content promotion strategies and use of anonymous accounts to create an environment of falsehood and fake news in the health sector is expanding beyond the boundaries. With various techniques and tools from Individual User Profiling, Artificial Intelligence, filter algorithms, bots, trolls and many more, the online data of users is being hampered; their search results are getting curated (Bunker, 2020). During any health crisis such malpractices come over the surface more clearly. Age of online media has witnessed many disease outbreaks like nCovid-19, H1N1 flu, Ebola virus and Zika Virus. During the Ebola outbreak in 2014, various fake news stories made rounds over social media. Some communities prevented themselves from reporting symptoms of the virus after believing various rumours about the secret burials, medications and magical cures (Jones & Elbagir, 2014; WHO, 2014). Current coronavirus pandemic is witnessing the cruelty of infodemic. Wildfire like spread of fake news, misinformation, unverified content about covid-19 on Twitter, Facebook, You tube, Whatsapp, Instagram, Telegram and other platforms has become an issue of serious concern for medical experts and health intellects (Srivastava et al., 2020). Soon after the lockdowns and restrictions enacted by the various governments of the states, the fear mongering nature of these online malicious actors has started creating panic among the people. General public has become anxious of this unprecedented crisis. Unverified information about the use of Hydroxychloroquine to treat the symptoms of covid-19 (Srivastava, et al., 2020) along with other quack treatments and remedies have motivated people to go for such medicines and cures leading to lethal results. From hiding symptoms of the deadly virus to believing conspiracy theories and attacking medics the situation of pandemic in India has worsened.

E-health literacy in India: The digital population of India stands at approximately 688 million as of 2020. India is witnessing a dynamic growth in terms of internet access among rural and urban populations. The number of digital population of India is expected to expand over 974 million users by 2025 (Statista, 2020). In India users have varied levels of health literacy. Low health literacy poses numerous problems not only for consumers but for the whole nation. It can

impede the individual's capacity to obtain health information leading to poor healthcare decisions (D'Cruz & Aradhya, 2013). It results in an increased number of emergency services, health care expenditure, mortality rates and infections. In India 9 out of 10 people suffer from low health literacy (Kumar, 2019). Individuals with poor health literacy even struggle with their ability to perform e-health searches (Nguyen et al., 2013). Wikipedia's prominence over internet search results, which is a user edited encyclopaedia without any credible source of authenticity, is quite high among users (Mackert et al., 2009). From the knowledge of using or operating mobile devices to accessing online content over the internet many people are struggling. With poor electronic health knowledge, individuals are unable to differentiate between fake news and credible news. A single WhatsApp forward has the ability to act as a catalyst to incite fear and turmoil among people. During any health emergency multiple sources of disinformation emerges out to create havoc by some mischievous minds. Poor health communication during such emergencies forces the people to search on the internet for health related news. It creates a situation of information overload and the excessive search on the internet also causes Cyberchondria which affects people by impairing their cognitive reasoning (Starcevic & Berle, 2013).

CONCLUSION

In a digitally less literate country (Financial Express, 2018) with a population approximately 1.380 million (Worldometer, 2020) it becomes of utmost priority to develop and enhance its public health sector on an urgent basis. In today's digital world, advancement in technology along with its benefits also poses a challenge to digital health literacy. Electronic health has the potential to bring a revolution in the way health information is being provided, but the needs and preferences of the low-health literate population needs to be taken into consideration. To evaluate how the media is framing the public health epidemics, to understand basic functioning of the internet, individuals require basic literacy of digital technology. Training should be imparted to the frontline workers and health educators about proper usage and knowledge about online public health systems. Health educators and health workers then need to aware people about the importance of health literacy, electronic health literacy, health education, proper use of technology driven health services and their pros and cons. People need to be educated about the basic skills required in this digital health ecosystem. E-health literacy educators need to broadly inform the people about the world of algorithms and their role in moderating public health content in today's digital health environment. To combat the sprawl of misinformation trends on social media, the platforms need to take the responsibility of the content being posted online. Facebook has recently introduced an update warning users against posting any unauthentic information. The World Health Organization is also working with social media platforms to manage the infodemic (WHO, 2020). These online platforms need to be more transparent with the information they provide to users and should ensure that users receive understandable and clear information. The recommender algorithms need to be more transparent to the people especially for content searched pertaining to wellness and health care.

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