Covid-19 pandemic and the rise of the digital age: Reflections on current and potential impacts to humanity, society and the healthcare system

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Abstract
This article is a reflection on the current and potential impacts of COVID-19 pandemic along with the concurrent rise of the digital age. This brings forward a question of how we define 'health' in contemporary society considering the massive, unexpected, and novel changes from the individual to the global level that were brought about by the COVID-19 pandemic along with the increase use of the internet. This manuscript threads through the changes happening in the different bio-psychosocial dimensions of the human being and how we are implicitly challenged to adapt in these different areas. Pros and cons of this social transition and possible challenges, particularly focusing on the healthcare system is presented. It is undeniable that we are collectively entering a new era that is mostly unknown. This can bring mixed feelings of fear and anxiety as well as curiosity for the new opportunities it can offer in human evolution. Unspoken and covert demands currently being faced by the healthcare industry—particularly the practitioners, researchers, and educators in various healthcare fields—amidst two new social changes (COVID-19 pandemic and the rise of the digital age) are written and explicitly outlined in this text for consideration. Furthermore, this article describes the impacts of all these changes to the essence of humanity, thereby, leaving the readers with points to ponder and reflect upon.

Keywords: COVID-19; digital age; healthcare system

Introduction
The World Health Organization defines health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. It is the enjoyment of the highest attainable standard of health and is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition (World Health Organization (WHO), 2021). Amidst the new normal situation brought about by the COVID-19 pandemic, will this definition be retained or will there be a need to redefine health?

The COVID-19 situation in 2019 has shaken the world in almost all of its core aspects—health, economics, tourism, education, and social connections (United Nations (UN), 2020). This pandemic has indirectly caused a massive shift from a face to face society to a dominantly online-based society. In the beginning of 2021, we have just entered this scenario and the impact it can bring to the quality of life of human beings is still massively unknown. Prior to this pandemic, our mobile smart phones have already been a one-stop unit for all our needs. May it be in finance, communications, entertainment, work, relationships, and health-Tracking. Mobile smart phones have been a regular and consistent part of our everyday lives across all age groups. In the rise of this COVID-19 pandemic, the intensity of use and exposure to the digital world has dramatically increased particularly when the usual face to face interactions of education and dining were forced to transition and evolve into a purely online basis. Work from home and online food deliveries have become the current trend and even the current need; thereby, leaving the streets and the used-to-be busy and lively restaurants, schools, pubs, markets, parks and various meeting places empty and silent. This pandemic has also forced people to more or less live a solitary life with the guidelines on social distancing and prohibited social gatherings.

This poses a challenge and a question as to the future and evolution of humanity. To date, the human being is considered a multidimensional specie (physical, emotional, spiritual, mental, and social) with multidimensional and complex needs including connection (both physical and non-physical) and belongingness on top of food, shelter, and clothing. The succeeding paragraphs explores the current and potential impacts of the rising digital age amidst the COVID-19 pandemic to the essence of humanity, the society at large, and the healthcare system.

The Rise of The Digital World and Society
The current dominance of the digital world such as the recent implementation of 5G technology, and perhaps 6G in the near future, has created vast and unknown changes to humanity and society in general. This brings both feelings of excitement and anxiety. Excitement for the convenience and expansion it brings, and anxiety for perhaps the loss of old (human)

connection, lifestyle changes, disruption of the old routines and the introduction of the new normal. Thereby, demanding utmost adaptability and resilience from individuals to cope with the rapid changes.

The combined timing of COVID-19 restrictions, work from home agreements and the rise of 5G technology has connected more devices and lifestyle activities to the internet, thus creating a major change in our daily lives. It is no question that smart devices have now become a part of almost everything we do such as in communications, business and finance, educational system, dating and relationships, self-image, and mental health services such as counseling and psychotherapy.

It cannot be denied how online technology has contributed to the betterment of human society. What we used to do for days and months can now be done in a couple of seconds. Snail mails used to reach us in days, weeks or even months. While now emails, social networking sites and apps have made it possible to exchange conversations in real time.

More opportunities have also opened up for the masses in the world of business and finance. In the recent months, there has been a rise in online shopping and online stores, thereby giving opportunities for start-up entrepreneurs, as well as small and middle-scale entrepreneurs.

So much has changed in the education system. The lock downs and quarantine periods have moved students from the four corners of their classroom to the comforts of their homes. Education has never been this boundary-less and borderless, it used to be a far from reality idea to learn from teachers coming from different nations with different cultures and traditions while being in a multinational online classroom.

Dating has never been this easy, this accessible, and this convenient especially during the COVID-19 pandemic. The use of dating applications such as Tinder, Skout and Badoo has gone to the roof. At this time, meeting "The One" online is exciting yet also challenging considering that the individual does not only have one, two or three options but hundreds and even thousands of men and women.

Our own identities and sense of self has also been redefined in this digital age. The online platform has somehow created a temporary boost in one's self-confidence particularly due to the rise of photo editing applications and the increased use of social media including Instagram, Facebook, Snapshot, and YouTube. Also, in these times, taking photos has become part and parcel of everyone's life. If no photo has been taken, then the experience has not existed. In these times, our sense of self has been carved in virtual rather than physical presence.

Health services and healthy industry was also drastically revolutionized, at least in most countries, in this digital era. The patient-related admission, endorsement, and discharge processes have been converted online. Health trackers (e.g. mobile applications, watches etc.) have been on the rise to monitor our health regularly. Even the fields of counseling, mental health and psychotherapy, both training and practice, have evolved to the online platform. It is yet to be determined if online sessions are as effective and efficient (if not more) than face to face sessions. There is so much opportunity for research on this field including how it affects the patient and the practitioner in the long-term.

Challenges To Society

Amidst the pros of the digital age, it cannot be denied that there are new challenges and consequences that come with the transition from the physical and tangible reality to the current rising virtual reality. This includes the rise in cyberbullying and harassment, financial scams, changes in diet, exercise, and lifestyles, anonymous online dating and virtual relationships, loss of (manual) jobs, urgency of communications and connections, black market and cybercrimes, internet addiction, isolation/disconnection/loneliness, rise in suicides, stress, anxiety and other mental health issues (United Nations Thailand, 2020) [10]. Some of these issues are elaborated in the next paragraphs.

Cyberbullying and harassment has now shifted from the schools and classroom environments to the virtual space (Reader's Digest, 2020) [6]. What used to be a public incident involving the bully, the one being bullied, and witnesses is now a private experience that happens between the person and his/her digital experiences. Parents and families may not be aware of the private experiences of their children and particularly young family members which can potentially be detrimental to the mental health of the young members of our families.

With the birth of the digital world, also comes the sprouting of a new financial economy environment that is so new and unknown, thereby offering lots of space for exploration and expansion. The rise in the use of digital currency and online payments have offered so much convenience and also threat. It is unclear whether these financial vehicles are real (has real tangible earning), safe, and regulated considering the rise of online scams (Singh Lallie, et al., 2021) [7] particularly among the elderly population (Cross, 2020) [2]. These online scams can range from Ponzi schemes to love and dating scams. Also, there is a rise in cybercrimes such as online credit card theft, child pornography, and identity theft (Pranggono & Arabo, 2020). Despite efforts to create techniques and strategies to detect spams and compromised online accounts, these have been bypassed and new online spamming styles have risen (Kaur, Singh, & Kumar, 2018) [3].

Moreover, these COVID-19 and technology-related changes has affected our lifestyle. Our diet and exercise regimens have changed from a more active lifestyle to a more sedentary one (Peçanha, Goessler, Roschel, & Gualano, 2020) [4]. And since, agriculture has slowly disappeared as laboratory/process-prepared food have risen. This leaves a question as to whether the food we eat nowadays are of the same quality as earth-produced food we once knew years and decades back?

Another relevant issue rising amidst the COVID-19 pandemic and digital community is the increase in online dating and relationships. The social distancing and work from home arrangement has led to an increase in the rates of loneliness, anxiety, and depression among others. Obviously, society has evolved rapidly, however, it is yet to be resolved if the essence of being a human and the basic needs that come with being one has also evolved or if it should evolve amidst the current social changes. This is a time for a 'quality of life-check'. Considering that a human being has multidimensional aspects physical, emotional, mental, spiritual, and social among others. The question is whether all the aspects of being a

human are addressed, and that needs are met. Or do we just go with the flow and see what comes out of us? Do we adapt to using, and perhaps being one with, artificial intelligence in our daily interactions? Indeed, we are in the times when we are highly digitally connected and also isolated. Connected because we have never been this connected with our gadgets and social networking system in entire human history. However, this has removed our time from the present moment, reduced our physical human interactions as well as some human traits such as patience. If in the past, we have this patience to wait for letters and snail mails; now, there is this "indirect and given" expectation to respond/react to SMS messages immediately even beyond official office and personal rest hours. Has this not changed our lives these days? This has also created a wide gap and an even wider gap in the next years between the older and younger generation. Particularly, the younger generation now has spent their childhood with massive exposure to the digital world from their households, to their schools, to communities. Children who have grown in such social template will most likely create a future society based on this foundation. A society that is totally different from what we have right now. A Hollywood movie that highly relates to this potential experience is "The Matrix". This 1999 American science-fiction action film, has been famous for the blue and red pill, and for showing humans plugged to a virtual world. Wouldn't this be a possibility of our human society one day? Will this provide us a new way of social interaction, a way far different from our parents' and great grandparents' generation?

It is important to note also, that not everyone sincerely and openly accepts this change. There could be some individuals who prefer to be humanely than digitally connected, thus, this presents a potential splitting and polarization of human society. And if this is a possibility, how do we address this polarized needs?

Healthcare In Focus
By healthcare, I mean all healthcare professions that deal with the health and well-being of mankind including medicine, nursing, dentistry, and the like. The succeeding paragraphs present current and potential issues that the healthcare system may be facing in the contemporary times.

It is undeniable that during the COVID-19 Pandemic, the use of telemedicine has abruptly risen. This has addressed several health concerns amidst social distancing yet also resulted to concerns regarding technological literacy (Triana & Shah, 2020) patient safety, treatment efficacy, and ethical principles (Sosnowski, et al., 2020) [1]

The healthcare industry has also been affected by this pandemic with both pros and cons. One of the pros includes the massive and drastic sharing of helpful healthcare information across country and cultural borders. Experts of different fields are also now able to record and share their lectures that can benefit so many people at large beyond geographical and cultural boundaries. However, with the unprecedented increase in the rates of sharing information and the bulk of information through social media, it is now unclear what is reliable and what is not, what is valid and trustworthy or what is not (Wong, Ho, Antonini, & Lyness, 2020). It is

also in these times that there are polarities in expert opinions shared via social media that it is more difficult to decipher which information to use and not.

The simultaneous existence of the COVID-19 pandemic and the rise of the digital world has presented a new challenge to the healthcare community in different aspects—education, research, and practice. All of these areas are separate and interconnected at the same time. What affects one area and/or specialty of healthcare also affects other areas. Undeniable disruptions have occurred in healthcare education, research, and practice.

The current transition from face to face learning to blended online-face to face learning has been a challenging ordeal for educational institutions, instructors, and students leaving us with questions like "will blended or perhaps pure online learning offer quality education as face to face learning?", "how do we address educating students on the practical parts of the healthcare service." "In case the healthcare industry transitions to an online system, how should education evolve to adapt to this situation and meet patients' needs?" Does this online learning still embody and maintain the essence of these healthcare specialties?

As healthcare education evolves, this also brings a question to how healthcare practice is going to evolve. Currently, with the intermittent and unpredictable turn out of the COVID-19 pandemic and considering the existence of mutating strains, many of our students' clinical practicum exposures have been disrupted, primarily to protect the welfare of both students, hospital staff, and patients. And how about the issue on medical ethics? Will the traditional ethical guidelines still apply? Or will there be an urgent need to revise all of these? For instance, the current vaccination program, will this be a compulsory or will the "right to refuse" be valid in this case without untoward consequences to patients regardless of the choices they make.

Healthcare research is also most likely to evolve following the evolution in education and practice. The content and themes of healthcare-related researches will have to make adjustments in terms of data collection considering the rising new target population and "beyond-border" location, and new arising needs of all parties of the healthcare industry including patients, doctors, healthcare institutions and the interaction of all these with the digital world.

Are our current healthcare professionals, the experts and in various fields, digitally well-versed? Are they able to maximize the use of technology in educating the new generation, pass on the tacit knowledge and skills, as well as use digital technology in providing effective patient care knowing that there will be less physical and face to face interactions and more distanced care will be required. Is the healthcare industry ready for all these?

Summary
In the current and continuously evolving new normal society amidst the COVID-19 pandemic, a rise in the use of internet cannot be denied. There are pros and cons in this new situation, many of which are still unknown. Nonetheless, there is a need to assess and evaluate our current situation and status as human beings in relation to who we are and how we relate

to society. This is particularly a call to the healthcare industry which will greatly be affected considering the impacts that these global changes can bring to humanity. It is most likely that there will be greater and new demands to the healthcare workers in addressing the multidimensional health needs of the individual, family and community. The question is, are we ready for these changes? Will this be the new normal? Or in time will we revert back to the society we know prior to this pandemic? Whatever our answers may be, it is indeed necessary that we adapt ourselves to these changes, to the known (s) and unknown (s), to the new opportunities for expansion, for learning and for discovery.

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