

Strategic Impact of Artificial Intelligence on the Human Resource Management of the Chinese Healthcare Industry Induced due to COVID-19

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Abstract: The purpose of this research is to determine the utilitarian role of Artificial Intelligence within Human resources in Healthcare prevention to manage global risks. By establishing COVID-19 as a catalyst for new innovative AI solutions, this research, centered on China, will evaluate the sustainable and viable proficiency of AI to act as a partner in progress to mitigate future virus outbreaks. The structure is designed upon an exploratory research with an ontological and epistemological philosophical approach. Since the chosen topic is discussing a current issue that hasn't been resolved yet, it seemed relevant to adopt this method, in order to find new insights. This journal will be using a combination of both qualitative literature review and in-depth secondary analysis, as part of the exploratory research. Keeping the Global pandemics in the backdrop of the discussion, the research studies the limited exploration of Artificial Intelligence with respect to Human Resource management in the Healthcare industry and its scope thereof. The research tries to analyse the sustainability of technological innovations within AI and aims to present an original perspective to start a discussion on exploring the scope within AI to transform the global management practices in Human resource management within the ambit of organizational ecosystem.

1 INTRODUCTION

Pandemics have been a topic of centuries. Whilst literature, artists and scientists painted chaotic scenes virus outbreaks have travelled through time as one of the most notorious human threats. From the prehistoric epidemic in Circa which erased a village in China, 3000 BC., to the yellow fever in 1793 or the American Polio in 1916, or the Zika virus in 2015, pandemics have created economical slurping and have changed the course of history. Nevertheless, optimists would assert that these phenomena gave birth to increasing healthcare innovations and enabled medical progress. Amongst them, the recent developments in Artificial Intelligence (AI) have served many aspects of global healthcare development. (Davies, 2019) Not only the technology has shown proficient results in tracking and collecting data during outbreaks, but also its dynamic structure has shown

potential in preventing virus spread. In the light of COVID-19, several multi-nationals have explored the alley of Artificial Intelligence as a risk managing tool in the age of globalization. Nevertheless, the dynamic nature of Artificial Intelligence challenges the Human-centric organizational chart of international companies as many fears its growing capabilities to replace human resources. Abhivardhan (2020) This is the reason why managerial implications of AI requires an exploratory research perspective as its self-transforming nature evolves through the developing healthcare demand of global industries. The focus of the review will be the integration of Artificial Intelligence and its relationship with global companies, subsumed into the international operations and human resources management in multinational corporations across different industries. The discussion will expand on these changes and explore the sustainability and proficiency of those innovations.

2 LITERATURE REVIEW

2.1 History of AI used to mitigate pandemic contagion /learning from other pandemics

While vaccination is a known remedy to prevent viruses from spreading, the latter can take months to develop and go through healthcare institutional tests depending on the country. (Tsunoda et al, 2011). Previous pandemics and outbreaks have shed light on disruptive innovations enabling both contagious spread and prevention. The analysis of a virus outbreak phase has provided researchers with a clear vision on the ways AI's could play an active role in preventing and tackling the contagious spread in the event of a pandemic.

Going back to 1918 during World War I, the lethal Spanish flu was a catalyst for research on Artificial Intelligence's role in mitigating viruses. As observed in a short timeline of the influenza (Figure 1, next page) spread, researchers have highlighted the lack of available antibiotics or vaccines that could tackle the outbreak. In a study by Davies (2019), the author applies available Artificial Intelligence tools to the below Influenza milestones time frame and issues theories on how it could have helped in preventing the virus.



Figure 1. Centers for Disease Control and Prevention, Influenza Milestones

*Center for Disease Control and Prevention (2018) “History of 1918 Flu Pandemic,” cdc.gov/flu/pandemic-resources/1918-commemoration/1918-pandemic-history.htm , cdc.gov

Three key uses of AI are highlighted by the author. The first one consists of using virus trackers which would leverage geo-localization features to monitor the spread. In second, the author pinpoints the efficacy of AI in data-collection. Indeed, according to Davies (2019), digital intelligence would have the capacity to detect outbreaks and their pattern in infected populations. This would also serve low-income countries which would have less infrastructure in place to track an epidemic spread. Finally, Davies outlines AI’s capacity to tackle logistical challenges during global outbreaks. According to the author, AI innovation would be able to select suitable strategies for better communication across global offices. Because air travel might be a cause for the rapid spread of the virus, the author positions AI as a tool to assist multinationals in their global health assessment and identify the appropriate communication channels to conduct business between international subsidiaries.

2.2 The ethos of Artificial Intelligence in a global workspace

In regions with limited access to quality healthcare, AI could greatly aid medical practitioners, allowing them to focus on critical cases. However, due to operational, legal, technical, or other constraints, such solutions are rarely deployed in practice at a global scale.

Abhivardhan (2020) exposes the unconventional body of Artificial Intelligence which disrupts global policies and jurisdiction standards. As Artificial Intelligence has the capacity to represent or replace human resources, developed countries are establishing “technocratic” governance in regard to managing these innovations. Two factors usually add weight in establishing legal framework for AI practices, which are “natural morality and one state’s interest” (Abhivardhan (2020)). Indeed, the technologic law and ethics not only involve identity-led ramifications, but also present data breach risks and cyber-security threats.

Wisskirchen et al (2017) gives an example of patient data breach in a healthcare organization as per the Chinese data protection laws (Wisskirchen, et al., 2017). Healthcare facilities risk breaching confidentiality as China has a relatively low level of data privacy protection. Despite the fact that the storage of data by Chinese companies is regulated by strict laws, the data subjects are unable to enforce their rights effectively (Wisskirchen, et al., 2017). Employer liability issues equally increase as employees connect their own devices to the hospital’s network and erase the borders between personal data stored on their devices and company-related data (Wisskirchen, et al., 2017).

This example highlights that legal implications of AI are sensitive to countries’ institutions and mindset regarding relevant technology. The factor of “enculturation” defined as an evaluation of AI in its coordination with identity and cultural rights emulates the status of AI as a manageriallegal entity that would influence an organization’s human culture and principles. Consequently, the integration of AI in a global workplace would go beyond its utilitarian purpose. Abhivardhan (2020) establishes AI as a “transformative” entity which would require a juristic assessment of its constitutional validity on a local and international level. Therefore, the stature of AI would be considered as entitative and imply identity-led jurisdiction frameworks.

2.3 Integrating Artificial Intelligence in organizational Value Systems

In a focus group conducted by Salathe et al (2018), researchers evaluate AI based applications enabling virus testing with symptomatic decoding. This group invites a range of specialists from

healthcare practitioners to entrepreneurs, business policy makers and leaders to set goals and objectives in leveraging Artificial Intelligence within their organizational value systems. Whilst opting for Artificial Intelligence integration can be risky and costly, organizations can explore different alleys of their value systems. Being defined by Matos et al (2011) by “the set of values and priorities that regulate the behavior of an organization”, value systems serve employees to assess effective mechanisms to facilitate innovation.

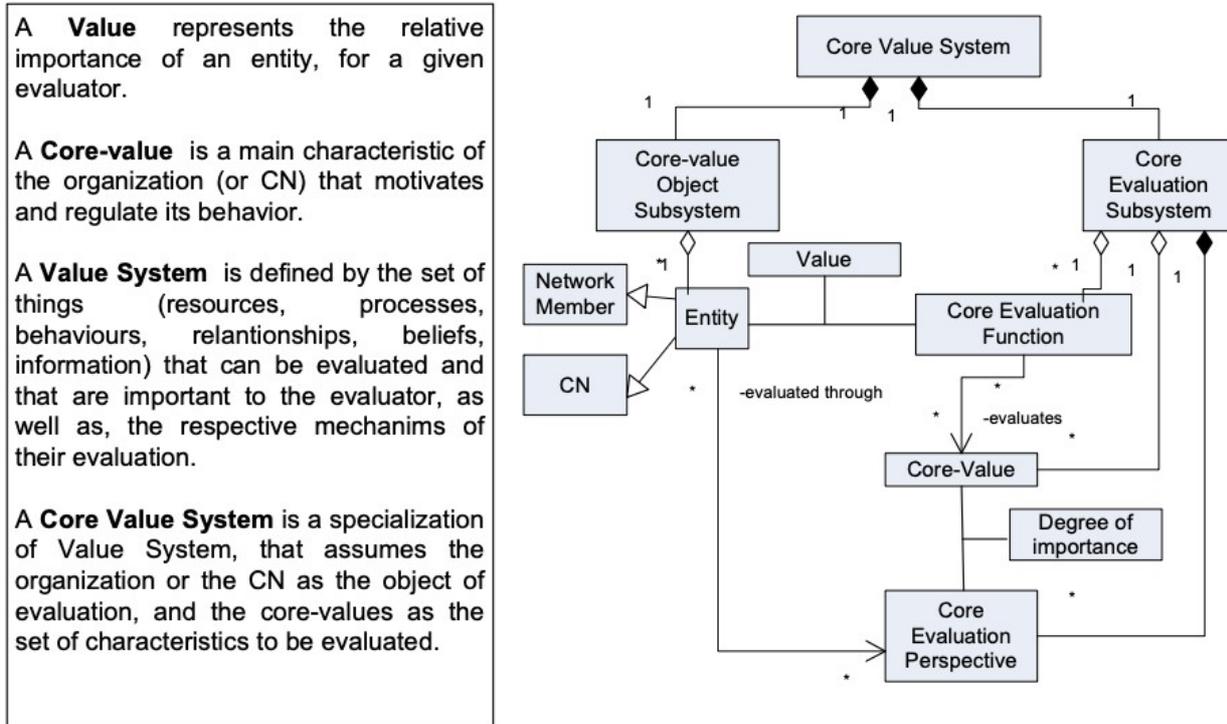


Figure 2. UML Diagram of the CVS Conceptual Model

*Luis M. Camarinha-Matos, 2011, Technological Innovation for Sustainability Second IFIP WG 5.5/SOCOLNET Doctoral Conference on Computing, Electrical and Industrial Systems, DoCEIS

Figure 2 (previous page) schematizes the structure behind organizational evaluation of innovation by an organization’s members. This framework places core value and as an active player in determining innovative integration. This factor is interlinked with two subsystems: the core-value objects subsystem standing for an organization’s employee network, and the core evaluation subsystem characterizing factors and variables to assess an organization’s core-values. These value-based factors reflect the relationship and nature morality of human resources leveraging Artificial Intelligence. This dyadic interaction is configured to create effectiveness when AI is positioned as a partner in progress with a sustainable value based purpose.

Matos and al (2011) highlight organizations, usually small to medium enterprise, diving into co- innovation systems to minimize costs. Nevertheless, these partnerships can cause trust management and intellectual property management challenges. Co-managing Artificial Intelligence can be challenging in achieving sustainable common goals. Research has shown that collaborative innovation needs to rely on defining a responsible talent pool with the skills and profile to put innovation into practice. As part of the Human Resource organizational chart, these profiles would be “innovation” facilitators and form a bridge between Artificial intelligence and integrative

processes.

Given the afore-mentioned relevance of AI in tackling viral outbreaks in the absence of effective vaccines, it has been integrated in healthcare centers across China at the early start of the pandemic. As such, it has delivered significant practical value for healthcare institutions given the fact that China possesses a pool of talented AI scientists. Also, China had embraced the “Next Generation Artificial Intelligence Development Plan” to boost AI development by 2030. In the healthcare sector, during the coronavirus, AI broadened the employees’ capabilities and replaced few human tasks. As such, in the near future, it will highly likely reshape the human resource processes of medical centers in China. Nevertheless, the extent to which it will positively impact staff remains a moot issue.

2.4 The Importance of Artificial Intelligence in China during COVID-19

Telemedicine, facilitated by AI, enables China to follow the World Health Organization’s recommendations concerning the protection of health-care workers in order to minimize the spread of the infectious agent (Chauhan, et al., 2020). As such, artificially intelligent cloud robotics is being used during the pandemic to facilitate telemedicine services across the entire health-care delivery system. AI is equally used to forecast the ending time of COVID-19 across China (Hu, Ge, Li, Jin, & Xiong, 2020). The use of AI reduces the burden of routine tasks such as temperature checks, monitoring of vital signs and taking mouth swabs for COVID-19 tests among others. In turn, the information is processed, and the results are sent to the doctors for diagnosis. AI is also used to deliver online mental health services to the population. Telehealth services protect the medical teams from the virus spread while increasing their access to patients’ data for appropriate treatment. Simultaneously, they reduce the administrative processes behind organization of consultations and corresponding staff planning. The accompanying efficiency gains are essential during the COVID-19 disease as they guarantee increased access to medical services irrespective of the availability of physical infrastructure and medical equipment.

Additionally, in China, these innovative medical interventions enable the doctors to serve patients from remote locations and permit recruitment of cross-border medical expertise. According to DeBlois and Millefoglio (2015), they equally rendered the merging of medical services, collaboration and learning a top priority. The benefits of cooperation spill over to developing countries with a limited pool of medical specialists or inadequate experience handling viral outbreaks. For instance, at the start of the pandemic in Mauritius, Chinese doctors provided virtual COVID-19 training to the Mauritian medical staff. Such sharing of information is crucial for these developing countries with relatively poor public healthcare systems. On the other hand, China’s medical sector appears more prestigious to foreign countries. Consequently, this may boost an inflow of health tourism in China in the near future.

2.5 Impact of Artificial Intelligence on Employee Recruitment Process

Robotics in telecare redefines the recruitment process for healthcare professionals. As such, while telemedicine robots have previously been embraced in viral outbreaks such as Ebola in Africa, resistance to this innovative practice persists worldwide. The tendency to stick to the traditional face-to-face consultation approach is explained by the fact that medical employees bear negative emotional reactions such as fear while handling technological devices, feel that their jobs are threatened, consider their workflow to be disrupted by technology and believe that their professional relationships with their patients is adversely impacted with the use of artificial intelligence (Xue,

et al., 2015). Xue et al. (2015) highlight that employee resistance is likely to occur in countries with inadequate governmental support for telemedicine. However, the Chinese government favors telemedicine and the country enjoys three major telemedicine networks (Wang & Gu, 2009). Therefore, with changes in the recruitment process of medical staff, the likelihood that employees resist telecare may be minimized.

In this respect, job advertisements should be modified in order to attract both medical and non-medical applicants with an interest in applying artificial intelligence in their work routine. At the same time, those candidates whose technical profiles will be beneficial for a potential telecare department should be hired. For instance, hiring graduates from “data science” and “automation bionics” degrees will ensure healthcare institutions are well-equipped to implement artificial intelligence (Wisskirchen, et al., 2017). Alongside, medical facilities should consider recruiting more information technology technicians to look after the equipment and ensure smooth operations. With increased automation, employment contracts should contain clauses surrounding the use of artificial intelligence. For instance, it becomes necessary to specify the definition of working hours and rest periods (Wisskirchen, et al., 2017). Furthermore, new recruits should be assigned to pilot teleconsultation projects in order to gauge their technological abilities.

2.6 Impact of Artificial Intelligence on Employee Training

In China, during COVID-19, provincial governments provided subsidies for employee training and for the purchase of teleworking service devices (Okyere, Forson, & Essel-Gaisey, 2020). Using multimedia network platforms, employees in hospitals are trained to operate the artificially intelligent medical robots for undertaking coronavirus tests and treatment. They are familiarized with the major functions of the robots by being imparted tacit knowledge. Such training is important to minimize the myriad of technical challenges when using these technological instruments for multifaceted operations. Moreover, it reduces the risk of employee resistance. Training also eliminates the dependence on mere knowledge workers. Instead, the focus is shifted from task execution to creative problem-solving in order to bring value added for the hospitals. In light of the new coronavirus cases which emerged in Beijing in June 2020, healthcare institutions should provide refresher training to their employees for the operation of AI tools. Besides, lifelong learning renders employees agile in adapting to the dynamic technological environment. Contingency training is equally important to ensure employees are able to respond effectively in case of machine breakdown.

2.7 Impact of Artificial Intelligence on Employee Performance and Motivation

From a managerial perspective, with the use of AI in the workplace, it is of utmost importance that amendments to employee performance management are made. This is due to the fact that the work environment has evolved rapidly with the onset of COVID-19. During these extraordinary times, clinical workers in China have experienced elevated stress levels as they were relocated from their hometowns to Hubei (Mo, et al., 2020). The latter is the province where the first cases of coronavirus were manifested. The stress load was positively correlated to the fear of losing a family member while they worked away from homes (Mo, et al., 2020). Besides, increased reliance on AI in the medical field represented new challenges for workers and added to the existing pressures. Hence, Mo et al. (2020) state that medical workers should be remunerated with non-monetary packages such as a strong social support system in the professional arena in order to build psychological resilience. Also, in China, payment in kind in the form of free meals was allocated to healthcare workers. The extra working hours should be rewarded in the form of overtime pay or

time-off from work once the workload in the healthcare sector in China has subsided. The individual employee's overall remuneration should be scaled up as the boundaries between working time and personal lives become blurred with AI. Given the unusual working conditions and the high risk of exposure, medical staff's performance should be assessed with respect to their work deliverables both prior to and during the pandemic.

Furthermore, it can be argued that the use of artificially intelligent robotics improves employees' motivational levels. As such, from a psychological viewpoint, employees experience burnout, coupled with the fear of being infected with coronavirus, due to the long-working hours in face-to-face consultations. This results in energy depletion, feelings of helplessness and reduced work effectiveness. For instance, in China, it was noted that up to 71% of medical workers suffered from depression and insomnia during the pandemic (Lai, Ma, & Wang, 2020). Therefore, robots aid in alleviating the work pressure. Their use is psychologically comforting to the doctors and nurses as they are able to maintain physical distance from potential coronavirus patients. However, the increased social distancing measures and virtual working groups may restrict seamless collaboration and spark limited creativity among the employees (Wisskirchen, et al., 2017). Nevertheless, they face less pressure as they are aware that in case one of their colleagues falls sick, they are able to easily retrieve the patients' medical records electronically and ensure continuity of their treatment. They are equally able to easily share the workload remotely and in a coordinated manner. This boosts productivity and facilitates a work-on-demand culture.

2.8 Impact of Artificial Intelligence on Employee Termination

While the advent of AI has led to the creation of new jobs such as data scientists, it has contributed to reduced demand for low-skilled workers (Wisskirchen, et al., 2017). As such, the use of intelligent robots is gradually replacing blue-collar employees in the healthcare sector in China. Cleaners are being substituted for robots to sterilize hospitals. Also, unmanned carts are being used to deliver medical supplies and food to patients in lieu of humans. These anti-epidemic tools create competition between humans and machines. The former is naturally inclined to feel threatened as technological instruments are not entitled to sick leaves, overtime pay, local and parental leaves among others. In short, their working capacity does not depend on uncontrollable factors for humans such as climatic conditions and fatigue. While this leads to labor cost savings for medical facilities, digitization might create a fear among skilled workers such as doctors that they will be replaced by intelligent software. While the current academic literature does not specifically analyze the impact of AI on workers' employment in the medical sector, in the long run, it may lead to low employee morale among the existing healthcare workers as they experience poor job security.

2.9 Strategic implications of HRM on business

Upon exploring the literature of artificial intelligence and its impact in the field of Human Resource Management from different viewpoints such as recruitment, training, performance, and termination, there is abundant evidence that its importance in the healthcare industry will only grow. AI not only impacts tangible aspects of HRM, but also has an active role to play in employee motivation and morale. The spillover effects of this can be salient in a company's overall performance and hence, its long-term strategy.

Human Resource Management was initially viewed as an administrative department which merely focused on recruitment, training, grievance handling and dismissal. However, in a more contemporary setting, HRM is closely associated with a company's strategic performance and has

hence become an indispensable part of strategic decision-making (Alshaik, 2012). Although there is still no agreement about the specific curricula revolving around strategic HRM (SHRM), practitioners in general look for candidates trained with specific knowledge, skills, and attitudes (KSAs) when hiring for the SHRM department (Coetzer & Sitlington, 2014). This is but a fundamental indicator of the increasing importance of HRM in a company's strategic management.

Akhtar, Ding, & Ge (2008) opine that in the post-reform China, the importance of SHRM has been observed in Chinese firms as well. This is owed to the fact that the advent of foreign investment enterprises marked the decline in the performance of a lot of state-owned enterprises (SOEs). Traditional HRM practices which focused on centrally planned economic welfare and equal pay (Ding, Fields, & Akhtar, 1997) were rapidly dropped in favour of "HRM best practices". Companies now measured job performance relative to skills and rewarded employees based on this measured performance. As Akhtar, Ding & Ge (2008) noted, there is significant empirical evidence that suggests that SHRM practices are not only important to Chinese companies and management but are also integral in strategic decisions made by such firms. This applies to the healthcare industry as well.

Since the emergence of COVID-19, a lot of industries and economies have enforced strict lockdowns, forcing entire industries and economies to shut down. While most industries and their work-from-home strategies are evolving, the healthcare industry has moved into overdrive. The pressure to innovate has never been higher on the industry than now.

There is substantial evidence that SHRM leads to increased innovation in organizations (Nonaka & von Krogh, 2009). This is said to occur through the enabling of transfer of knowledge. A study (Scully, Buttigieg, Fullard, Shaw, & Gregson, 2013) explains the extent of impact that SHRM can have in the healthcare industry. It shows the importance of tacit knowledge being codified into explicit knowledge in hospitals. As per the study, effective SHRM practices lead to improved patient care due to improved transfer of knowledge and the overlap of skills between the different teams of staff, which lead to a more holistic approach to treatment, right from the stage of admission, through to rehabilitation and discharge.

Artificial Intelligence stands to bring a lot of changes to Human Resource Management as we know it in the healthcare industry. The next section will discuss three key areas of business related to HRM that directly impact business strategy: organizational structures, sustainable competitive advantage and future HRM practices.

3 DISCUSSION

AI has a potential to affect various dimensions of the organizational management structure. This section will critically analyze three such areas for the healthcare industry.

Organizational structures are key to business strategy implementation because they consist of employees of the organization who are responsible for the execution of said strategy. Olson, Slater, & M. Hult (2005) provide substantial evidence that an excellent strategy requires effective execution and for that to happen, it must be complemented with the appropriate resources, one of the main ones being, efficient human resources and an appropriate organizational structure. Hamadamin & Atan (2019) explain in their research paper on "sustainability", that competitive advantage sustainability, although a conventional concept, is a comparatively contemporary business objective. They posit that human capital development through SHRM is crucial for companies to attain this advantage. Although the paper talks about the healthcare industry in China, competitive advantage

sustainability for the industry as a whole is a necessity, especially after the world has become more prone to pandemics of global scale. Finally, the paper looks at future HRM practices that ultimately impact business strategies and execution.

3.1 Organizational structures

AI has the potential to replace certain roles of healthcare management due to its unique and well-developed technologies. As such, AI infrastructure spans statistical analysis, image data, text data and voice data. Therefore, the ways in which the roles of human resources management in the healthcare industry can be replaced by AI are discussed in this context. Alongside, the changes in the organizational structures of the hospitals are evaluated. Image data is related to computer vision. Classification of images, detection of objects and their segmentation form part of computer vision. As far as the classification of images is concerned, AI can help distinguish the small differences between two high similarity pictures (Marr, 2020). This is difficult for ocular detection by humans. Therefore, AI aids doctors in their diagnoses. Consequently, jobs related to checking X-ray pictures or any roles involved with checking the pictures and noting the differences could be replaced by AI technology. As far as the detection of objects is concerned, AI can detect the objects automatically. For instance, temperature testing helmets were worn by Chinese security forces in public spaces to detect the potential negative cases of COVID-19 (Hu et al, 2020). In turn, this prevented the disease's spread. The usefulness of this technology lies in its rapid detection capability as well as cost efficiency. At the same time, it enabled the medical team to focus on more urgent matters. Hence, the jobs related to testing and detecting of the coronavirus could be replaced by AI in the healthcare system.

Furthermore, enhanced image processing by AI plays a significant role in medical treatments. Enhanced image processing delivers more accurate results due to its reliable algorithm. This helps doctors to treat the medical cases more effectively. By using this technology, medical assistants for image processing in the healthcare system might be replaced by AI. Moreover, with the development of artificially intelligent technology, operating medical treatments through long-distance video mode is feasible. Consequently, the medical teams may have to learn more about the control of AI at the expense of acquiring medical knowledge.

Also, the text data of artificially intelligent technology processes natural language and context. This can assist in the analysis of large numbers of medical records. The text recognition technology of artificial intelligence is introduced to help doctors to deal, analyze with the massive medical, electronic records. Furthermore, in applying technology, doctors can easily understand the patients' issues. Also, there may be an automatic correction for doctors when they perform diagnosis. Thus, nurses may be replaced by the text recognition and automatic correction technologies. This leads to a flatter hierarchical structure and smaller teams in the healthcare centers.

Lastly, for the voice data, the technology revolves around voice speech in the form of the "ask-answer" system (Davenport & Kalakota, 2019). It serves as an artificially intelligent diagnosis tool for the healthcare industry. In this system, patients can self-diagnose with certain pre-programmed questions and answers. By using this technology, it is easy for healthcare departments to accurately channel patients to the different departments. Additionally, this practice can be implemented for patients from remote areas or physically handicapped.

3.2 Sustainable competitive advantage

There are multiple processes involved in medicine such as diagnosis, surgery and medical therapy delivery among others. In today's healthcare system, AI plays an important role. It comprises different technologies including machine learning technique, automatic robotics, computer science and so on. Each of these aspects play a key role in the healthcare system. As such, robotics can perform tasks that are beyond human capacity. For instance, robotic surgery delivers faster and more accurate surgical operations. Nevertheless, there are tasks which are not replaceable by robotics. For instance, critical patients who need special care should be looked after by medical staff. The current pandemic pushes organizations to adopt technology rapidly. Failure to adopt AI implies that organizations will lag behind in terms of competitiveness.

Firstly, competitive advantage is derived from the fact that AI reduces the risk of contagious diseases' transmission. For Example, doctors can do the surgery remotely by interacting with virtual images and being assisted in the actual surgery by robotics. Robots can patrol most areas and report abnormal situations to the monitor center instead of medical employees in hospitals. The smart sensors help the medical staff to monitor the critical patients. Therefore, the risk that the medical employees are exposed to the virus is reduced. Furthermore, only few medical staff are required to monitor multiple patients which reduces the number of medical staff.

Machine learning, the core of AI, constitutes an indispensable diagnostic tool for doctors. Machine learning technique enhances image recognition and uses large amounts of training data to predict the results. Therefore, machine learning can distinguish a tiny difference between a normal Computerized Tomography ("CT") scan and infected CT scan. Sometimes, this cannot correctly be diagnosed by humans. Also, often, a patient's CT scan needs to be diagnosed by more than one doctor to reach a conclusion (Lin et al, 2020). With image recognition tools, the doctors can quickly make an accurate diagnosis which reduces the risk of misdiagnosis. Overall, the use of AI can deliver faster and more innovative medical treatment at lower costs, thereby reducing operational costs.

Another important artificially intelligent technology used to fight COVID-19 is big data. Recently, China has launched the health Quick Response ("QR") code to each citizen. The health QR code can gather personal information including health status. The Chinese citizens should scan the QR code to enter public spaces such as shopping malls and subways. With the information collected, big data technology rapidly tracks the potential infected individuals once they have been in contact with the diagnosed patients. The use of big data technology provides adequate information to track the patient and minimizes the spread of the virus among the country.

AI technology can only excel at well-defined tasks. It can be solely used as a tool for supporting doctors but not replacing them. The first insight of competitive advantage of using AI technology in the healthcare system is to reduce the risk of spread of the infection in the medical staff. In addition, the use of AI leads to competitive advantage as it helps the medical teams deliver fast and accurate diagnosis, thus, reducing the doctor to patient ratio without compromising on quality, thereby driving the staff's costs down. The other competitive advantage of deploying AI technology in the health system is that the efficiency for the utilisation of hospital beds could be increased as admissions may be based more on critical patients.

3.3 Future HRM practices

HRM practices, in future, would need to continue adapting to the new pandemic situation and evolve the process of making the process of disbursing healthcare services in a more effective and efficient way. COVID-19 has opened opportunities for the healthcare industry to expand its reach through technology and innovation and thus, cater to even the most remote patients while keeping their variable costs in check. For example, the Telemedicine services in China have been able to cater to more patients remotely. Although, healthcare services industry is both capital and labour intensive, this one-time transition of combining healthcare services management with AI can help in increasing the scope of medical services reaching the underserved. As the healthcare industry across the globe was jolted into changing the ways it had been conducting business, it would be interesting to observe how the industry would combine its human resource, capital and technology to keep tackling the ongoing challenges.

For the hiring process, the healthcare industry may transition into online application processes and virtual interviews by effective use of applicants tracking systems and skill verification portals so as to ensure quality. Healthcare industry is heavily dependent on a strong supply chain of vendors, consultants and third parties for expertise, medical supplies and other support services, therefore, there would be a need to create a diversified supply chain network using both human resources and technology. The focus of this diversification may shift towards automation in processes and minimal disruption in operations. The future decisions for client selections may also focus on background screening service providers, digital solutions capabilities and automation level. The workforce in the industry would need to be adaptive to the fast changing and evolving technological innovations.

Although Artificial Intelligence cannot replace the human workforce, the future work culture may need to fine-tune the balance between AI and medical staff, where AI would be used as an effective tool to create minimal disruptions in operations and management practices while maintaining the conditions to ensure minimal human interaction in the pandemic, so as to prevent the spread of the viral diseases. As the workforce may become highly dispersed, there may be a greater need to reprioritize the employees background screening processes as the health institutes would have to tackle the emerging risks in the form of cyber fraud, data security, financial frauds, reputational impacts and employee due diligence (EDD). As remote treatments and consultations may become a norm, there may be reduced oversight and monitoring which would further call for a robust databases and verification system ensuring protection of privacy and digital security of the employees. There would also be a need for the management to modify the employee training programs to ensure smoother long-term transition of the workforce to the newly evolved ecosystem to ensure that employee productivity is not curtailed by the new working practices and culture.

4 LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

As the article is a conceptual one, it reduces the scope of the paper and is thus reduced to focusing on the changes that may take in the HRM process. As the new ecosystem is still evolving and there is paucity of information, the study is narrow and limited to the present situation. Future studies may focus on gathering spatial and temporal data to make more accurate predictions about the future course of HRM process and workforce evolution. Future studies need to devise ways to understand the specific skills which may become more crucial with the integration of AI in the management processes. More empirical studies about the impact of the advent of AI caused by COVID-19 on HRM of the healthcare industry of China could reveal the authentic nature of the way the industry is changing.

5 CONCLUSION

Since the spread of Spanish flu of 1918, researchers have shifted their attention to finding a stable and sustainable solution to mitigate the effects of the spread of viral diseases. As the impact and extent of these pandemics have been increasing exponentially with each new outbreak, it becomes imperative to focus one's attention on the use of technology, especially Artificial Intelligence, to tackle this increasing challenge. While tracking the influenza milestones, the paper discussed the three key focus areas that emerged in the AI domain to address the problems of tracking viruses, collecting data and solving logistical challenges. As AI has the potential to overhaul the manner in which the healthcare industry disseminates services, discussion on the ethos of AI in global workplace becomes important. Studying the legal, social, cultural and economic implications of introducing AI in the workplace thus, calls for a balance between the human resources in the industries and the technological innovations being introduced. The paper also dwelled into how integrating the co-innovation systems in the organizational core value systems may require an innovation-friendly talent pool.

The paper studied how Chinese healthcare industry's quick adaptation to AI through telemedicine, cloud robotics, telehealth services and Health QR code among others helped the country to curtail the rapid spread of COVID-19. China's approach towards handling the pandemic can be set as an example for the future course for the healthcare industries across the globe. It is needless to say that the healthcare industries, both in developed and emerging countries, need to push the boundaries to fast-track the introduction of AI in its operations, management and strategies, while keeping the human resources relevant. There is no doubt that this giant leap at technological innovation would modify the human resource management process in the healthcare industry but how smooth will this transition and transformation be is a question this paper leaves for the future to determine.

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