Article

Fourth Industrial Revolution and Post COVID-19: Workplace Implications and Insights for Future Research

Kalimullah

Abstract

Given centrality to the issue of COVID-19 and its widespread impacts, this theoretical article has fostered a debate for future research pertaining to Covid-19 effects on various spheres of organizational psychology. More specifically, this paper proposes a future research agenda, discusses on issues and implications for an organization. While emphasizing on postcovid19 workplace environment but more significantly this article also provides some insight on working environment of fourth industrial revolution with relation to the post COVID-19 workplace environment. As, the article is theoretical and therefore, it is based on observations of covid19 pandemic and also based on secondary data the form of some academic articles and reports. As, COVID-19 has been stimulus for tremendous layer of change in all spheres of human life and hence it is also expected that postcovid19 workplace environment will not remain the same and therefore organizations need to rethink, recommit and reposition their existence for sustainable performance in the era of fourth industrial revolution.

Keywords: *Industrial Revolution, COVID-19, Psychology, Pandemic*

Dr. Kalimullah *is Assistant Professor, Kardan University, Kabul, Afghanistan.*
<kaleembangash@gmail.com>

Introduction

The unusual virus called Coronavirus disease as label with COVID-19, appeared in 2019 from Wuhan, one of the cities of China, which has been completely different from the previous viral diseases. The unique virus was named as COVID-19 by the Chinese scientists (Khan *et al.* 2020). Later on, in a shorter period, this COVID-19 spread worldwide. Several country's economies are severely affected due to COVID-19. Further, the outbreak has changed the operating conditions all over the globe within a month. The consequences of a pandemic are unstoppable and uncontrollable for many industries of the world. Later on, almost all countries stopped their regular economic, educational and other commercial organizational activities. Many countries and organizations all over the world switch their operation from physical to online. Along the same vein, government of Afghanistan also issued the order to close all regular or physical operations. Resultantly, organizations come under crises to deal with this unknown situation of the COVID-19 pandemic. This situation has realized the importance of digitalization all over the world in general while Afghanistan in specific. This has challenged organizations and leaders to respond to crises and to rethink for organizational or workplace strategies. Therefore, author is of the view that COVID-19 crises is the drive for fundamental change and create an opportunity for organizations to rethink and to reposition their organization in postcovid19 workplace environment in the short term while repositioning their organizations in the long term keeping in view fourth industrial revolution which is going to transform each and every physical activity into an internet of everything. In this regard, the following section provides literature on COVID-19 and some of the studies on fourth industrial revolution to provide a base for author's argumentation.

2. Literature Review

In today's competitive, dynamic and global world, organizations are on the brink of transforming their systems to adjust with fourth industrial revolution. While organizations of developed countries were in the same transformation process on one hand, the other hand organizations of developing countries were reluctant to adjust and adapt the digitized models. Fourth Industrial Revolution has begun in the twenty first century and has brought revolutionary changes to the entire system of the organization. This revolution has fundamentally changed the whole world's view of the working environment of institutions and organizations. According to Mohelska, and Sokolova, (2018), 18th century is considered the century of the first industrial revolution that relied on coal mining, steam machinery, and machines for production. Along the similar lines, 20th

century is labeled with second industrial revolution and its trigger point was electricity. The best example in this case is the mass production. Similarly, automation, information systems and technologies introduction was considered third revolution started back in 1970s. The fourth industrial revolution (FIR) took place in the early 2000s. The fourth revolution is the overall paradigmatic shift towards technology advancement, Artificial intelligence, automation. The emerging literature on Fourth Industrial Revolution (Vogel-Heuser and Hess, 2016; Liao *et al.*, 2017) discuss the significance of technology, innovations and its technical aspects needed for organizations to sustain in the era of Fourth Industrial Revolution. Though the emerging literature highlighted and discussed fourth industrial revolution with the relationship of many aspects of organizations to sustain in the age of fourth revolution. Whilst some changes have been enforced due to fourth industrial revolution, COVID-19 pandemic has been considered as a catalyst to reinvent the future of work and should consider workplace environment.

As the covid19 is a recent phenomenon and therefore relatively no prior research is available in general while organizational psychology in specific. Few of the recent articles found in databases (Shahzad *et al*, 2020). However, these articles present research on either e-learning education experiences of male and female students or clinical psychological perspectives of effect of covid19 were presented. Relatively, less research has been done on organizational psychology. Therefore, given the inclusive impacts of COVID-19, this article emphasizes on workplace and organizational psychology. In the context of covid19, as the issue is recent and less research work has been done on Covid-19 with relation to organizational psychology and hence needs future research agenda in the context of almost all aspects of human life and indeed in the context of organizational psychology and workplace practices. Moreover, in the recent paper of Kniffin *et al.*, (2020), three main issues are concluded for organizational psychology, the first one is emerging changes in work policies and practices which include mandatory work from home, virtual settings and second important issues highlighted by hard business review are the issues of social-psychological effects which are measurable such as unemployment, mental illness, addiction and third significant aspects are the moderating variables e.g., age, race and ethnicity, gender, personality, family status, and culture. All these moderating factors will have indeed different covid-19 impacts. Furthermore, recent work by Bavel and colleagues' (2020) engagement of COVID-19 in relation to topics such as how people tend to respond emotionally and interpersonally in situations of uncertainty and fear. Regarding the application of provisional-by-nature

knowledge from the social and behavioral sciences to understanding and responding to COVID-19. In relation to crises, a report issue by Deloit in 2020 on covid 19, mentioning three phases important for any crises management in general while COVID-19 in specific.

The three main phases proposed are 1) Respond 2) Recover 3) Thrive. In respond phase, originations deal with the crises on urgent basis to continue their operations, in recover phase, organizations learn to emerge and become stronger while third phase is thriving where organizations prepare for and try to shapes the new normal. Linking, post covid19, organizations in Afghanistan are now in second phase to recover and to prepare for the future normal shapes. However, the future normal shapes in post COVID-19 should be visualized in immediate normal shapes as well as prepares organizations for the adaption of fourth industrial revolution. Therefore, Post COVID-19 workplace environment in the short term while fourth industrial revolution in the long run call for new policies and procedures for better, suitable and sustainable organizations all over the globe and also in Afghanistan as a war-ravaged country in specific. However, the question is: What are the most important factors of consideration in getting normal shape of workplace? The answer undoubtedly is the workforce of any country is behind the economic cycle of economies and nations. Along the same vein, the workforce of Afghanistan's organizations is not an exception in this regard. The issue of getting normal in postcovid19 is a burning issue which would indeed take time to investigate. However, five factors proposed by Delloit (2020) are helpful in regard to getting normal shapes for future work. The five factors of consideration are 1) Reflect, 2) Recommit 3) Re-engage, 4) Rethink, and 5) Reboot. In the Reflect phase, organizations should reflect on their actions during crises, what they have done whether it has worked, what has been learnt, what has been missed in crises to respond, for this purpose, organizations must bring various stakeholders to listen their voice. In second phase, Re-commit, organizations must ensure the wellbeing of workforce while emphasizing on workforce psychological, physical and financial concerns. Likewise, the third significant aspect is to Re-engage which is the re-deployment of workforce to maximize their potential for their maximum contribution to evolve the organizational priorities. Linking previous factors, the fourth is the subject of Re-think of work, workforce and workplace. It is in fact to leverage the experiences of covid19 responses and the drive or opportunity to accelerate the future of work.

Along the similar lines, the fifth factor is Re-boot HR and people operations priorities. This is to re-align HR and people operations priorities

with the business and workforce priorities. HR has to embrace the recovery process, and has to redefine roles and policies for the postcovid19 workplace and for the digitized workplace in the era of fourth industrial revolution to sustain organizations. In this regard, the following section discusses conceptual framework of this study with emphasis on future research actions in the context of workplace environment in general while workplace environment in Afghanistan in specific.

3. Conceptual Framework

Given centrality to the issue of covid19 and its widespread impacts, this article draws conceptualization of Covid19 with relation to its effects on emerging changes in organizational practices as well as economic and social psychological factors. As mentioned in literature part, psychological effects are emerging changes in work policies and practices which include mandatory work from home, virtual settings and the issues of social-psychological effects which are measurable such as unemployment, mental illness, addiction and on top of this, significant aspects are the moderating factors e.g., age, race and ethnicity, gender, personality, family status, and culture. All these moderating factors have indeed different covid-19 impacts on workforce (HBR, 2020). Therefore, before considering the implications, it is of paramount significance to investigate Covid19 with relation to emerging changes in work related factors, economic and social psychological factors. Furthermore, many moderating factors such as age, gender, ethnicity, personality will have different moderating role in terms of Covid19 impacts. Based on foregoing discussion, the author proposes following factors for future investigation in the context of Afghanistan.

Figure 1: Conceptual Framework
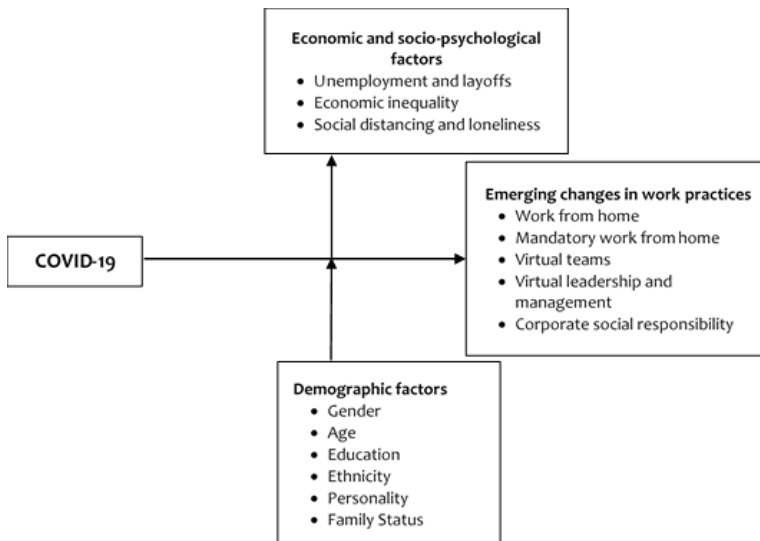
Source: Author's compilation

4. Future Research Recommendation

Based on above proposed framework, this article put forward future research agenda while linking aforementioned factors in empirical investigations for future research. This is not yet clear whether the effect of Covid19 is same for all type of organizations, whether mandatory work from home can lead to better performance, Whether mandatory work from home can be influential in fourth industrial revolution, Whether internet of everything can be the sustainable solution, How mandatory work from home policies influence workers attitude and behaviors towards their employers and as well as towards their colleagues and coworkers, how social inequality can be reduced in pandemic situation, What should be the organizational policy in case of presentism, how organizations can maintain quality interaction among employees, what can be the mitigation factors of reducing loneliness in workplace. Moreover, investigation on moderating factors is another significant aspect of effect of covid19 as it not known how organizations would deal with specific age workers associated with risk of covid19, how sense of belonging can be enhanced among members of various ethnic groups in the case of jobs uncertainty, whether there is any differences in the feminine and masculine leadership style in crises like covid-19, what specific traits of leadership differentiate women and men leadership in pandemics. Along the similar lines, is mandatory work from home has more effects on working women than working fathers and lastly, personality may be studied in future research investigation with special reference to investigate the different type of personality, like to see whether the effect of COVID-19 was same for extroverted, introverted, practice, reactive, perceiving people, what specific traits of personality can be more influential in fourth industrial revolution. Investigating all the aforementioned issues and coming up with concrete conclusion would help leaders and managers to reposition their organizations for their sustainability.

5. Conclusion

This theoretical article has put forward the debate an agenda for future research investigations. More specifically, this paper proposes future research agenda, discuss issues and implications for organization. While emphasizing on postcovid19 workplace environment but more significantly this article also provides some insight on working environment of fourth industrial revolution with relation to postcovid19 workplace environment.

References

Anderson, R. M., Heesterbeek, H., Klinkenberg, D., & Hollingsworth, T. D. (2020). How will country-based mitigation measures influence the course of the COVID-19 epidemic? *The Lancet*, *395*(10228), 931-934.

Cirrincione, L., Plescia, F., Ledda, C., Rapisarda, V., Martorana, D., Moldovan, R. E., & Cannizzaro, E. (2020). COVID-19 pandemic: Prevention and protection measures to be adopted at the workplace. *Sustainability*, *12*(9), 3603.

Dong, E., Du, H., & Gardner, L. (2020). An interactive web-based dashboard to track COVID-19 in real   time. *The Lancet infectious diseases*, *20*(5), 533-534.

Spurk, D., & Straub, C. (2020). Flexible employment relationships and careers in times of the COVID-19 pandemic.

Shaw, W. S., Main, C. J., Findley, P. A., Collie, A., Kristman, V. L., & Gross, D. P. (2020). Opening the Workplace After COVID-19: What Lessons Can Be Learned from Return-to-Work Research?

Kniffin, K. M., Narayanan, J., Anseel, F., Antonakis, J., Ashford, S. J., Bakker, A. B., ... & Creary, S. J. (2020). COVID-19 and the Workplace: Implications, Issues, and Insights for Future Research and Action.

Cirrincione, L., Plescia, F., Ledda, C., Rapisarda, V., Martorana, D., Moldovan, R. E., ... & Cannizzaro, E. (2020). COVID-19 pandemic: Prevention and protection measures to be adopted at the workplace. *Sustainability*, *12*(9), 3603.

Khan, S., Siddique, R., Shereen, M. A., Ali, A., Liu, J., Bai, Q. ... & Xue, M. (2020). Emergence of a novel coronavirus, severe acute respiratory syndrome coronavirus 2: biology and therapeutic options. *Journal of Clinical Microbiology*, *58*(5).

Shahzad, A., Hassan, R., Aremu, A. Y., Hussain, A., & Lodhi, R. N. (2020). Effects of COVID-19 in E- learning on higher education institution students: the group comparison between male and female. *Quality & Quantity*, 1-22.

Shaw, W. S., Main, C. J., Findley, P. A., Collie, A., Kristman, V. L., & Gross, D. P. (2020). Opening the   Workplace after COVID-19: What Lessons Can be learned from Return-to-Work Research?

Liao, Y., Deschamps, F., Loures, E. D. F. R., & Ramos, L. F. P. (2017). Past, present and future of   Industry 4.0-a systematic literature review and research agenda proposal. *International Journal of Production Research*, *55*(12), 3609-3629.

Mohelska, H., & Sokolova, M. (2018). Management approaches for Industry 4.0–the organizational culture perspective. *Technological and Economic Development of Economy*, *24*(6), 2225-2240.

Vogel-Heuser, B., & Hess, D. (2016). Guest editorial industry 4.0–prerequisites and visions. *IEEE Transactions on Automation Science and Engineering*, *13*(2), 411-413.