

Covid-19: Interdisciplinary and transdisciplinary perspective on the Pandemic

Effect of Covid-19 on Scientific Research.

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ABSTRACT: -

In the past few months, the effects of Covid can be seen in various sectors which include Research and Development, education, medical science, and many others. Besides, this outbreak has created mayhem in the scientific community due to the COVID-19 intricacies. The scientific community has been experiencing a considerable negative impact from the COVID-19 outbreak, forcing the closure of universities, research centres, and laboratories. There are cancellations and postponement of most scientific events, including national and international conferences, symposiums, workshops, and training programs. In addition, there are also widespread job losses and threatened livelihoods of millions as businesses struggle to cope with the lockdown put in place to control the virus. Apart from specific sectors that could receive more funds, for example, pharmaceuticals more than health, surveillance and defence, communications, digital markets, and distant education, investments in every other sector are expected to plunge.

Keywords - COVID-19, College students, Universities, Scientific Research.

Overview of Coronavirus Disease: -

Coronavirus Disease is a contagious disease that first emerged in Wuhan, China in 2019. It was later coded "COVID-19" by the W.H.O which stands for Coronavirus Disease 2019. The Coronavirus outbreak remains one of the worst global pandemics for decades. The mortality rate soared and the easy of spread was upsetting. Research shows that older people and those with underlying medical problems like cardiovascular diseases, diabetes, chronic respiratory disease, and cancer were more likely to develop serious illnesses from coronavirus (W.H.O, 2020). Some of

the symptoms of Coronavirus include; Sore throat, runny nose, constant coughing/sneezing, breathing difficulty and fatigue.

This COVID-19 pandemic has already impaired global healthcare systems as well as affected every aspect of human life. For reducing the spread of the disease infection, governments of numerous countries have emphasized taking several unprecedented preventive measures like strengthening health facilities, closure of educational institutions, offices, markets, restaurants, museums, movie theatres, etc., prohibition on social gatherings, border shutdown, and travel restrictions. These social distancing measures have a substantive effect on education, health, business, tourism, and so on.

Research Method: -

A phenomenological qualitative research design was employed for this study, which was appropriate for the research as it can provide an in-depth understanding of the nature of a particular phenomenon.

Effect of Covid-19 on Scientific Research at Universities: -

Universities, research centers, and laboratories are the fertile grounds for the development of new ideas and the expansion of future agenda for the progress of science and scientific communities. Scientific events such as annual meetings of societies, national and international conferences, symposiums, workshops, elective training and clinical observerships, are significant grounds for the dissemination of research findings, to learn new skills, meet future supervisors, networking for further collaborations, and are the best platforms to search for career opportunities [2]. These scientific events are crucial

for early career researchers and scientists to introduce themselves and to present their research findings to a broader international audience, which provides further motivation for future innovations. Nations across the world have imposed travel restrictions to curb the spread of the coronavirus outbreaks. Most scientific events scheduled through September 2020 have been cancelled, and many more have been postponed, few have been able to convert to virtual meetings. Though these are responsible decisions and are in the best interest of our community, such changes will significantly hamper potential scientific innovations and have a tremendous negative impact on the career of researchers and scientists [8]. The cancellation of scheduled annual meetings of scientific societies will delay setting future agenda and policy-making, as well as deferment of entire scientific research processes on a global scale. In addition to detrimental effects in the scientific field, there will be a substantial economic burden on the organizers, delegates, and sponsors of scientific events. Although few in-person conferences are converted into virtual conferences, attendance is difficult due to logistical issues, time zone differences for attendees, internet connectivity issues, inattentiveness of delegates and speakers, accessibility issues, etc. [10]. Due to the announcement of lockdown, libraries, seminars, residential halls were closed immediately. The students living in the university residential halls had to leave the campuses and rush towards their hometowns or villages on short notice. So they could not even take all the necessary things with them. The entire academic and official activities of their universities were ceased abruptly. The students were unhappy, unsure and worried about their studies, classes, examinations, results and stressed and concerned about session jam.

Effect of Covid-19 on Scientific Research Funding: -

Additionally, many researchers, particularly from low and middle-income countries, have lost enormous opportunities for research awards and travel grants for 2020 scientific events. The reduction in scientific events and closure of the scientific workplace will result in the extension of research time, and, in some cases, will lead to re-starting entire experiments, or putting the experiments on hold, or downscaling them to a bare minimum, which will hamper the schedule of laboratories and research centers. The result of this will add to the economic burden of researchers, adversely affecting their career opportunities, ultimately fueling psychological stress, anxiety,

tension or depression, culminating in reduced scientific output. Beyond a general collective understanding that university budgets are likely to be significantly affected, particularly in those countries like the US and the UK where institutions are highly reliant on student fees for their income, it is unclear what the impact of reduced budgets will be on the research enterprise [4,5]. This is important because the adverse financial impact of the COVID-19 crisis could undermine the research funding streams of universities worldwide, and as such their ability to support the research activities in their institutions, the researchers they employ, and the research information infrastructure itself (e.g. academic libraries) and ongoing improvements to ensure a healthy research culture. Most of the analysis to date has focused on the instructional function of higher education, as institutions grapple with delivery models and in some cases residential implications.

Effect of Covid-19 on Scientific Research Hiring/Recruitment: -

This COVID-19 calamity has led to hiring slowdowns or outright freezes across the country in the United States, Australia, and the United Kingdom, where institutions depend on tuition fees for survival. Dr. Karen Kelsky, an academic career coach, recently listed more than 400 institutions in the US by May 2020 which had frozen hiring. This included leading research bodies such as Harvard University in Cambridge Massachusetts, Stanford University in California, as well as the entire University of California system. The University of Oxford in the UK announced a “recruitment freeze” in April. The rest of UK universities have yet to formally acknowledge any slowdowns or halts in hiring, but the freeze has probably spread across the country [12].

Conversely, universities in the European Union, where most researchers are supported by funding from the government or external agencies, are not yet in financial crisis and imposed hiring slowdowns. However, it is too early to conclude the impact of the ongoing pandemic on university budgets and engagement, as there is the possibility that this crisis may be much more damaging and longer-lasting than initially envisioned [13]. New graduates and PhDs who have not yet started their doctoral studies or postdoctoral fellowship are among the most vulnerable. Therefore, it is advisable to always have a plan b, possibly non-academic, as a back-up for a secure career [14].

Besides the effects on younger early career researchers and scientists, the COVID-19 pandemic has also been detrimental to the

academic environment in schools, colleges and universities, forcing students to wait an undetermined amount of time to begin their careers. Moreover, just as COVID-19 has shown social, racial, and economic health disparities, the pandemic seems also to have accentuated existing gender inequalities within the field of research. Indeed, early analyses suggest that female academics are publishing less and starting fewer research projects than their male peers [15]. This might be an effect of the lockdown and the fact that more women than are men are juggling caring for families and children despite both “working” from home.[16]

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