

The Impact of the Covid-19 Pandemic on Academic Research: Short Review

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Abstract

The pandemic Coronavirus disease (COVID-19) has resulted in more than over 3 million confirmed cases and over 1,061,727 deaths and its impacts Changes the medical landscape on the daily basis in research activities among the researchers, students, and post graduate medical doctors are caught off- guard and they were forced to make a decision on ongoing research projects. Henceforth, immediate requirement for conducting academic research through meetings on several aspects on this current high pandemic situation are needed. We have suggested and provided facilities in AVMC&H to conduct the research platform related to molecular diagnostics aspects of COVID-19 by Zoom, Cisco, WebEx, YouTube & Facebook live and also provided suggestions to researchers, clinicians, to

prevent and treat from the viral infection. Even though legal guidance from institutional organizations, the medical director and principal investigator are the ultimate responsible for the research coordinators for conducting, cancelling, postponing, rescheduling the research activities. Our review will come out to how to conduct the scientific meeting and carrying out the research ongoing projects during the pandemic situation on short time period. Further, we discussed the need of personal hygiene, transit, general safety precautions for each participant during the research process.

Keywords : Coronavirus, COVID-19, Academic research, Meeting precautions

Introduction

World is witnessing the pandemic of severe acute respiratory syndrome coronavirus-2 causing coronavirus infectious diseases 2019, commonly known as COVID-19.¹ The ongoing pandemic situation of coronavirus has significantly impacted the ongoing research and innovation community. As the situation with COVID-19 continues to evolve, there will be challenges for MBBS/MD/PhD research scholars in carrying out our research mission as well as our education mission. The COVID-19 has also affected the research field by which scientists, research scholars are not adequately concentrating on their regular works. With the pandemic, there is a shortage of patient's sample, scientific supplements from companies, reduction in number of technician and other equipment's and chemicals. Researchers identify an alarming shortage of critical outbreaks in their routine ongoing research projects and development. The significant effects of COVID-19 in the field of academic research are illustrated in figure1. Notably, so many research examination, research scholars ongoing projects, post graduate doctors clinical work were postponed due to restrict the spread of infection.

For the research and clinical practices in hospital criteria in India, that are potentially affected with COVID-19 strict and effective infection control protocols, so an evidence-based guidelines urgently needs to be developed.² Therefore, we drafted this guidance according to the rapid advice guidelines methodology and general rules of WHO guideline development^{3,4} and also from Aarupadai veedu medical college and hospital of Multi-disciplinary centre for biomedical research laboratory (AVMC-MCBR). The AVMC-MCBR for research has established the web page from the <https://avmc.edu.in> to provide regular updates and precautions for AVMC researchers. This rapid advice guideline is suitable for the first frontline scientists, researchers, research students, managers of health communities who are interested work in the 2019-nCoV out breaks. Our review follows specific guidelines provided by our AVMC-MCBR research team members to secure rapid critical appraisals of papers related to COVID-19 outbreak. Our assessment scrutinizes this short review opinions measures for sound scientific practices, in the hope that this will help researchers working on the COVID-19 outbreak. This guideline includes the methodology, how to conduct the meeting and also to carrying out the ongoing research projects during the pandemic situation

in organization, moreover we also provide a guidelines for personal hygiene, medical care guidance to clinicians, researchers during their scientific meetings and also how to their managing their ongoing research and planning for potential future limitations.

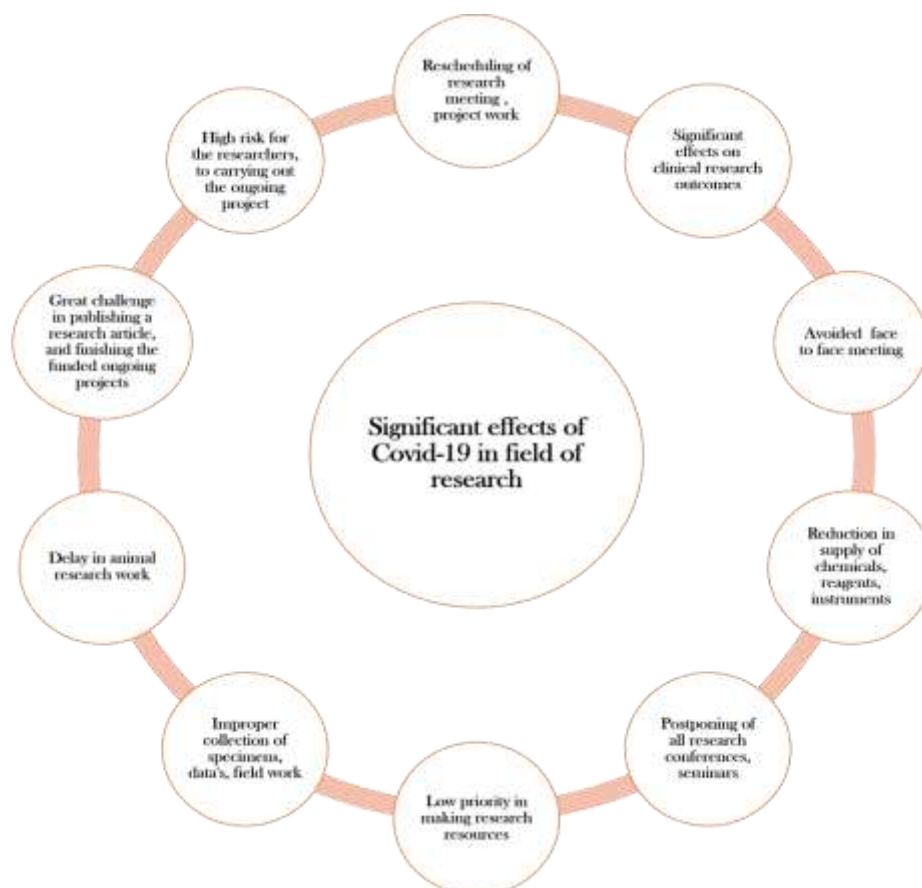


Figure 1: Shows the significant effects of COVID-19 in field of academic research

Search Resources

We searched the bibliographic databases: NCBI, Google, PubMed and Digital research library. We also searched following websites: the WHO (<https://www.who.int/>), CDC (Centers for Disease Control and Prevention, <https://www.cdc.gov/>), NICE (National Institute for Health and Clinical Excellence, <https://www.nice.org.uk/>), National Health Commission of the People's Republic of India (<http://www.nhc.gov.in/>), and National Administration of Traditional C Indian Medicine.

Guideline methodology

Our specific academic research meeting guideline was prepared from AVMC-MCBR research team members and also from general rules of WHO rapid advice guideline and WHO guide line development.^{3, 4}

Procedure for Personal Hygiene

Our objective of the guidelines was to lay down the procedure for personal hygiene. This Standard precaution is applicable for personal hygiene to all employees, researchers in all research departments. All department heads shall be responsible for personal cleanliness, hygienic operations, protective clothing of self and the department employees, contract persons & visitors.⁵

Precautions

Ensure proper hygiene while handling material, processing, and packing.^{6, 7}

Procedure

- ❖ General Requirements (Good Personal Hygiene Practice)
- ❖ Following are the minimum requirement for every person entering research area.
- ❖ Any employee suffering from an infection/disease like conjunctivitis, severe cold etc. shall not be allowed to enter area.
- ❖ Employee shall be trained to report any infection disease, so that they can be temporarily transferred to other areas.
- ❖ Every Supervisor or department heads will look after the signs and symptoms of COVID-19 and report to research committee immediately.
- ❖ Avoiding the crowded places and close contacts with people who are unwell or showing symptoms of illness.
- ❖ Practicing the frequent hand washing with soap (e.g. before handling food or eating, after going to the toilet, or when hands are dirtied by respiratory secretions after coughing or sneezing).
- ❖ Wearing the mask if the person having their respiratory symptoms such as a cough or runny nose.
- ❖ Covering their mouth with a tissue paper when coughing or sneezing, and dispose the soiled tissue paper in the rubbish bin immediately; and Seek medical attention promptly if you are feeling unwell.
- ❖ Avoiding sharing their food, cutlery, crockery and other personal hygiene items.
- ❖ Avoiding the physical contact such as shaking hands and avoiding the touching the face or rubbing the eyes.
- ❖ Personal Cleanliness
- ❖ All researchers should maintain their personal cleanliness.
- ❖ All researchers shall keep their hands clean and washing with liquid soap after visiting toilet, and urinals.
- ❖ Keeping nails trimmed and clean and ensure that facial hair does not cross the respirator mask sealing surface.

- ❖ All the employees should keep their personal belongings in their respective lockers.
- ❖ Visitors will be informed to keep their personnel belonging in the locker provided for visitors.
- ❖ All Employees shall wash properly mouth/hands after meals/tea breaks.

Research significance on COVID -19

COVID -19 impacts has mess up the research activities and distracted the ongoing research projects all around the world 10. Many precautions and scientific aspects have to be taken during the COVID-19 situations as shown in Table 1

Table 1: Shows the general guidelines for academic research which will be impacted by COVID -19 infection

S.No	Specifications	Description
1	General Guidelines⁸	<ul style="list-style-type: none"> ❖ Always maintaining their social distancing of minimum one-meter distance with other human being at all directions. ❖ Minimum touch with article and human Being - no handshake. ❖ Sanitize hands as much as possible. ❖ Don't use other person's laptop, mobile set or desktop. ❖ Conducting the online meeting from workstation through own laptop or own mobile. Do not use meeting room for any meeting. <p>All employees shall be informed that they will be under CCTV surveillance for monitoring the above guidelines & any non-compliance will be reported.</p>
2	During Transit⁹	<ul style="list-style-type: none"> ❖ Wearing their mask while starting from home. ❖ Maintaining their social distancing inside vehicle while going to the office. ❖ Speaking no words, unless it's necessary. <p>Avoiding food or other stuff from outside to their work place.</p>
3	During entry¹⁰	<ul style="list-style-type: none"> ❖ Maintaining social distancing after getting out of their vehicle. ❖ Keeping the records of each visitor including name, address, age and contact details. ❖ Speaking no words, unless it's necessary. ❖ Get the proper thermal screening conducted by OHC Person. ❖ Sanitizing their hands with the sanitizer <p>Answering questions on Health conditions asked by OHC</p>

		representative and Following the instructions from OHC representative, if-any.
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The end-user of the guideline

Our precautions guideline are suitable and useful for frontline researchers, scientists, scholars and doctors of hospitals and healthcare sections, healthy community residents, personnel in public healthcare, and all persons who are interested in the 2019-nCoV management. The Precautions for academic research meeting which will be impacted by COVID -19 as shown in table 2.

Table 2: Precautions for academic research meeting which will be Impacted by COVID -19

Specifications	Description
During the meeting or event ⁸ By Providing information or a briefing, preferably both orally and in writing, on COVID-19 and the measures that organizers are taking to make this event safe for participants	<ul style="list-style-type: none"> ❖ Encouraging regular hand-washing or use of an alcohol rub by all participants at the meeting or event ❖ Encouraging participants to cover their face with the bend of their elbow or a tissue if they cough or sneeze. ❖ Supplying frequent tissues and closed bins to dispose of them in. ❖ Displaying the dispensers of alcohol-based hand rub prominently around the venue. ❖ Opening the windows and doors whenever possible to make sure the venue is well ventilated. ❖ Offering a mask to the person so they can get home safely, if appropriate, or to a designated assessment facility

<p>COVID-19 risks before the meeting or event¹¹</p>	<ul style="list-style-type: none"> ❖ Ensure and verify information and communication channels in advance with key partners such as public health and health care authorities. ❖ Pre-order sufficient supplies and materials, including tissues, mask and hand sanitizer for all participants. <p>Make sure all organizers, participants, caterers and visitors at the event provide contact details: mobile telephone number, email and address where they are staying.</p>
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Recommendations and the way forward

Our review shows the exact holistic picture of the current academic research impact due to the COVID -19 out-break in India. COVID-19 considered as a pandemic health issues in among public and international concern, has yielded challenges for researchers, clinicians, and doctors. So far most research studies were focused on the origin, transmission, epidemiology, clinical manifestation, prevention and diagnosis of COVID -19. However, the studies exploring the impact on academic research due to coronavirus are not still exposed due to lockdown process. To continue the research activities in clinical and non-clinical aspects, researchers, clinicians, doctors are urgently needed proper precautions and guidelines to carry out the activities during this pandemic situation. By synthesizing the experiences of experts from all over the world, this Consent review paper establishes guidelines and practical recommendations to follow in operationalizing the research activities during COVID-19 pandemic, mitigating the risk of infections, and in preparing the research community for any future epidemic/pandemic. Due to the valuable guidance from our AVMC-MCBR research community along with the basic guidelines from WHO, CDC, ICMR, VRDL will be significantly reduce the infections risk in research background and the future research direction will be multi-disciplinary and transnational. Indeed, there will be a new insight focuses on academic research in both medical and non-clinical aspects for wellbeing of civilization, if further outbreaks arise AVMC-MCBR research community will be better prepared for them.

Acknowledgement

We sincere thanks to Aarupadai veedu medical college, Vinayaka mission research foundation for immense support to write this manuscript during pandemic lock-down period.

Financial support & sponsorship: None.

Conflicts of Interest: None.

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