

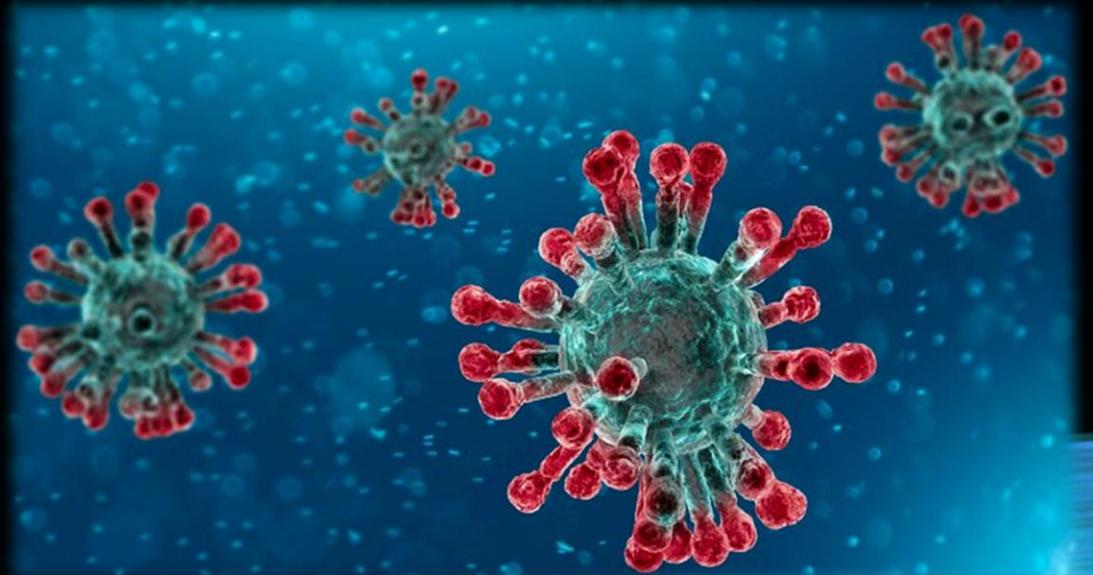
# CORONAVIRUS PROJECT

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# INTRODUCTION

- **LIFE IN COVID EPOCH**

- Nowadays we are living in a catastrophic situation due to COVID-19, a threatening pandemic against which we are fighting without big success, losing large numbers of human lives.
- This virus tends to attack our respiratory system giving breathing issues and this is the cause of people's death, because they can't breath anymore for the mucus fill lungs. This virus is considered a big problem for old people who already have other health's problem, but everyone could be infected and could die.



# PSYCHOLOGICAL PROBLEMS AND ITS EFFECTS ON MENTAL HEALTH

- **ARE WE SURE THAT THE VIRUS CAUSES ONLY “PHYSICAL PROBLEMS”?**
- Many researchers and funders are studying humans' behaviour during this period of difficulty. For example due to lockdown, people can't go out, meet friends or their partners. But not only this, which is a typical teen's problems, also many mature people cannot work and they don't know how gain money to buy something to eat.
- The researchers are particularly studying how COVID-19 affects anxiety, depression and suicides, which are increasing due to social-economic problems as we said before. Another problem is the social isolation and loneliness which are associated with anxiety, depression, self-harm and suicide. During this period is born a special number behind which psychologists are working to help people with these problems. However it's not so easy as many can think, because every single person has different fears and mental disorders. So everyone has to be followed and mechanically helped in different ways.
- The longer-term consequences of COVID-19 for the younger and older generations are also unknown and must be a priority.



# PSYCHOLOGICAL PROBLEMS AND ITS EFFECTS ON MENTAL HEALTH



- **WHAT SHOULD WE DO TO DEFEAT THIS VIRUS?**
- Hence, to defeat this virus which can lead to many more deaths, we must intervene as soon as possible because this is not an easy war. We must try to promote research and social initiatives. The priority is to understand how first-line health and social care personnel and their families can be supported to optimize coping strategies to mitigate the symptoms of stress and facilitate the implementation of preventive interventions in the future.
- During the COVID-19 pandemic, it is important that health and social care workers are supported because thanks to their work they bring enormous benefits to people's health and to try to start our lives again by saving the economy. Personalized psychological approaches are likely to be a key component in dealing with complex mental health conditions, as well as coping mechanisms and prevention, hoping to return to our normal and amazing life.

# SOCIAL AND POPULATION FACTORS: THE EFFECT OF COVID-19 ON MENTAL HEALTH

- **MENTAL HEALTH CONSEQUENCES OF THE LOCKDOWN AND SOCIAL ISOLATION**
- Some research has shown that living in a social isolation can cause a sense of loss across our society. Young and old people could suffer of lockdown due to the loss of positive activities and big changes in lifestyle, such as the closure of the schools or the total isolation from close relatives.
- The real problems are about vulnerable people, who are mostly people with mental issues or health workers (always subjected to strong emotions): the risk of anxiety, depression and stress has undergone a sharp increase.



# SOCIAL AND POPULATION FACTORS: THE EFFECT OF COVID-19 ON MENTAL HEALTH

- **HOW CAN MENTAL HEALTH CONSEQUENCES BE MITIGATED?**

- Firstly, a system to check all the lockdown's mental effects is required. Enhancing controls, we can also help more people with online mental health support. The mechanism it's not so easy: digital clinics and patient should always be in touch, with the utmost clarity, in order to provide increasingly efficient services.

- Another problem could be the great expenditure of forces: lots of digital science students and psychologists should be involved in the project; the research to find new solution to mental issues (such as arts as bearer of happiness) should also be implemented, always testing the goodness of the system's results.



# SOCIAL AND POPULATION FACTORS: THE EFFECT OF COVID-19 ON MENTAL HEALTH

- **THE EFFECT OF REPEATED MEDIA CONSUMPTION ABOUT COVID-19**
- Media are a fundamental way to acquaint all the people about the trend of the virus, but information also has the potential to distort reality if they are not treated carefully. People are daily subjected to a bombardment of data, and it's easy to be overwhelmed by anxiety and dejection.
- To defeat media abuse, a source of authoritative information is needed, to provide people true and verified news. The research's principal aim must be the removal of every type of misinformation.



# SOCIAL AND POPULATION FACTORS: THE EFFECT OF COVID-19 ON MENTAL HEALTH

- **PROMOTING METHODS ABOUT MENTAL WELLBEING AND COVID-19 PREVENTION**

- Lowering the curve of the infected is all about making good prevention, and the best way to spread good advices is using media; nevertheless, people may be too aware of the virus, developing obsession or anxiety. For this reason, the research must be focused in taking care of the message content.

- A good topic to think about is preparing people for a new pandemic, developing an efficient system to stand by people eith metal issues and better organise the society, giving them the knowledge necessary to defeat the virus in the shortest possible time.



# NEUROSCIENCE: EFFECTS OF THE VIRUS ON BRAIN HEALTH AND MENTAL HEALTH

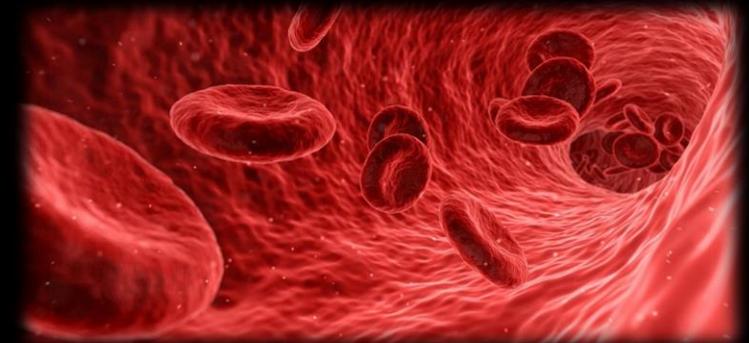
## • INTRODUCTION AND SYMPTOMS

- SARS-CoV-2 is a zoonotic virus and unfortunately there is insufficient data on its effect on the human nervous system. According to some research, half of the zoonotic virus epidemics have been caused by neurotropic viruses that invade the central nervous system, causing mental and neurological disorders.
- The neurological symptoms of COVID-19 infection are widespread and often serious. In a study of some patients in Wuhan (China) about 36% had central nervous system disorders. The reported problems are countless, including headache, loss of smell, muscle weakness, impaired consciousness and cerebrovascular complications.
- These acute neurological pathologies could reflect systemic aspects of the infection, such as disseminated intravascular coagulation that can cause stroke.

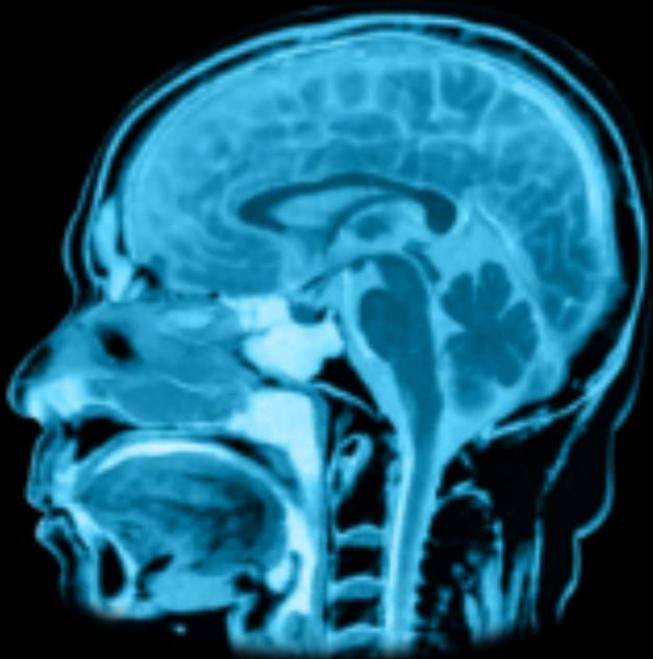


# NEUROSCIENCE: EFFECTS OF THE VIRUS ON BRAIN HEALTH AND MENTAL HEALTH

- **HOW DOES THE VIRUS COME INTO CONTACT WITH THE BRAIN?**
- It is not currently known whether SARS-CoV-2 infection could cause mental disorders, but now it is necessary to develop the ability to test these important potential biological causes of COVID-19 related mental illness.
- Immediate actions include the development of a large-scale neuropsychological database of COVID-19 cases by analysing patients being treated in hospitals and patients in isolation at home. Furthermore, the mechanisms by which SARS-CoV-2 could enter the brain should be understood. There are two possible ways: neuronal or vascular. The neuronal way, used by other corona viruses, is to invade a sensory receptor specialized in peripheral tissue, travel through axonal transport systems in the brain stem and propagate between neurons through trans-synaptic mechanisms.
- The vascular way is to invade the brain from the blood, through the circulating particles of the virus that can be transported through the blood-brain barrier by binding to ACE2 receptors (angiotensin converting enzyme 2) or through infected leukocytes that could carry the virus with them.



# NEUROSCIENCE: EFFECTS OF THE VIRUS ON BRAIN HEALTH AND MENTAL HEALTH



- **HOW CAN THE EFFECTS OF THE VIRUS BE STUDIED?**
- To study all this, it is necessary to use some techniques such as structural magnetic resonance imaging or quantitative imaging of cerebral blood flow. Other methods could include CSF sampling or the use of PET to measure brain inflammation.
- Therefore it is necessary to develop interventions to stop or prevent the adverse biological effects of SARS-CoV-2 on brain function and mental health. Thanks to accurate analyses, re-proposed drugs (such as ACE2 inhibitors) could be used.
- Academic and industrial researchers will have to work together to succeed in finding a decisive solution to this problem.

# INFRASTRUCTURE AND OPPORTUNITIES

## • **RACCOMENDATED ROUTES**

- Some of the immediate priorities for surveillance of general and specific populations for effects of SARS-CoV-2 infection on health, while another is to provide a resource for nesting intervention studies.
- Here three of the recommended routes:
- First, managerial information resources got from existing electronic wellbeing records, with frameworks set up to examine these for inquire about purposes, give a methods for recognizing wellbeing impacts at scale. Wellbeing Data Research UK is planning national endeavors.



CONTINUE →

# INFRASTRUCTURE AND OPPORTUNITIES

## • **RACCOMENDATI ROUTES**

- Second, surveillance through recruitment platforms and existing cohorts has the advantage of implanting research on COVID-19 into examines where members mental or intellectual wellbeing has recently been determined. Existing companions or information stages that can be quickly sent for COVID-19 research are probably going to be especially significant.
- Third, novel population-based studies on mental health and COVID-19 should be established, by obviously using right methods.
- Anyway, priority should be given to techniques that can find out COVID-19 status and its side effects.
- Public involvement in research is another important characteristic as the whole population has been involved in COVID-19.



# CALL FOR ACTION



- **WHAT NEEDS TO BE DONE TO RESPOND TO COVID-19?**
- Multidisciplinary mental health science research has to be the pillar of the international response to the COVID-19 pandemic.
- We need agencies to work with researchers to make sure that the mental health science research priorities are addressed swiftly, but we also need rigorous and ethically approved research developed by people with experience.
- The main priority is to collect data related to mental health and psychological effects of the COVID-19 and to bring them together under a national data portal for a rapid access.
- There is also a need for research to address the impact of rehashed pandemic-related media utilization and to enhance wellbeing informing around COVID-19.
- Obviously new funding will be required to meet these priorities, and it very well may be effectively utilized by the UK's reality driving neuroscience and emotional well-being research foundation as in these difficult occasions, emotional wellness science ought to be outfit to serve society and advantage both mental and physical wellbeing in the long term.

