

EFFECT OF COVID-19**Tejaswini R. Nimje*, Harshal R. Patil, Seeta M. Tamhane and Pooja M. Sonake**

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Corresponding Author*Tejaswini R. Nimje**Indrayani Institute of
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and Research.**ABSTRACT**

Due to the ongoing health crises threatening the world right now which is SARS-COV-2 or Covid-19 pandemic? We have circulated the survey to know the impact of covid-19 pandemic. We have the survey to know the impact of covid-19 in our life so we have conducted survey for 15 days from 4 October 2020 to 19 October 2020 and here we tried to present the overview of the most effective medicines for covid-19 till now. We also summarized possible therapeutic option currently under investigation and the future outlook for the disease and also the ongoing trails on vaccines.

KEYWORD: Pandemic, ongoing trials on vaccines, effective drug, survey.**INTRODUCTION**

Coronavirus disease 2019 has spread globally at a rapid pace basically covid-19 constitute the subfamily orthocoronavirus from the family coronaviridae order nidovirals and realm riboviria. They are enveloped virus with a positive sense single stranded RNA genome and a neucliocaspid of helical symmetry. The genome size of coronavirus ranges from approximately 26 to 32 kilobases one of the largest among RNA viruses. The virus has characterized as it has spikes like projection protruding from their surface. These spikes latch onto human cells, then undergo structural change that allows the viral membrane to fuse with the cell membrane.^[1] These virus circulate in humans, animals and birds causing seasonal pandemic outbreaks in the past months world has forced five pandemic respiratory disease caused by different subtypes of influenza virus.^[1] The corona virus outbreak which originated in the central Hubei province of Wuhan in china in the month of December. The common symptoms for covid-19 is fever, dry cough, tiredness, shortness of breath, chest pain, sore throat, chills, people who are older at age and the small children they have a higher risk of serious illness from covid-19. People who are suffering from chronic medicinal conditions

such as severe heart diseases like coronary artery disease, heart failure or cardiomyopathy, cancer, chronic kidney diseases, diabetes mellitus, asthma, liver diseases; high blood pressure weakened immune system from bone marrow transplant, HIV. It can also spread rapidly by having close contact with the infected person and also by cough or sneezed by the infected person.

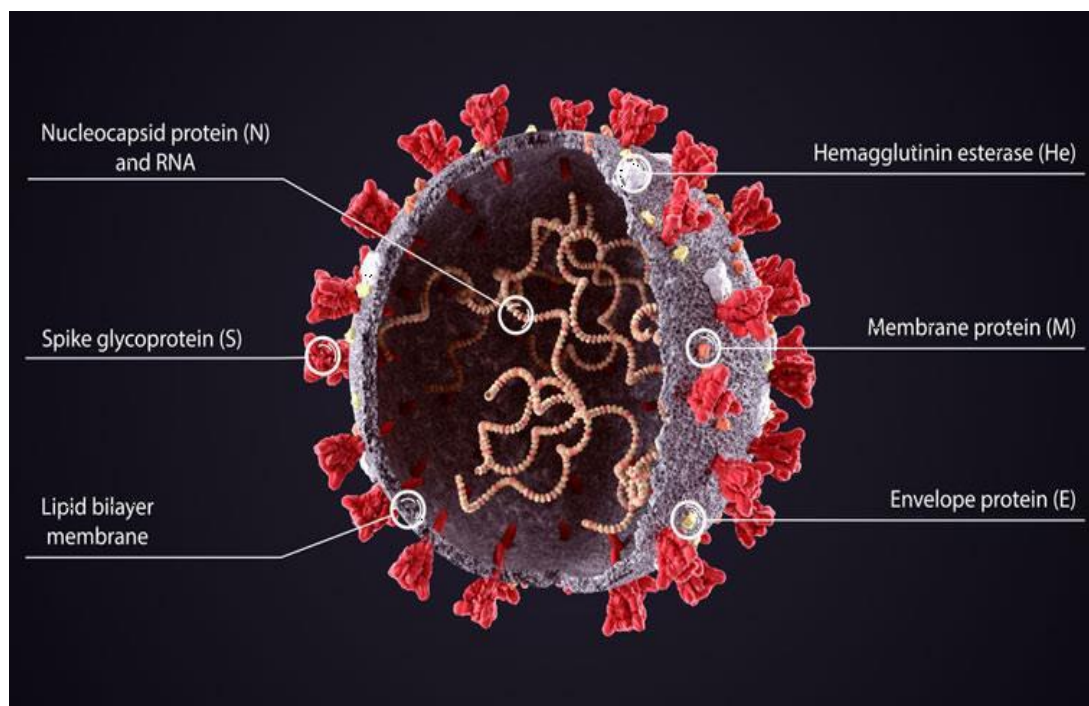


Fig. 1: Structure of coronavirus.^[3]

Ongoing trials on vaccines

A COVID-19 is any of several different vaccines intended to provide acquired immunity against coronavirus disease (COVID-19). Previous work to develop a vaccine against the coronavirus diseases SARS and MERS established knowledge about the structure and function of coronaviruses – which accelerated development during early 2020 of varied technology platforms for a COVID-19 vaccine.^[4]

Clinical trials in 2020:^[4]

S. n.	Vaccine Candidates Developers	Current phase	Complete phase	Adverse effects	Clinical trials site	Duration
1	AZD1222 University of oxford, Astra Zeneca	Phase 3	Phase 1 to 2	Pain at the injection site, headache, fever, chills, muscle ache.	20 in the UK Sao Paulo	May 2020- Aug 2021.
2	Unnamed Sino pharm: Wuhan institute of biological products.	Phase 3	Phase 1 to phase2	Injection site pain and fever which were mild and self-limiting, no serious effects.	Jioaozuo, Abu Dhabi	July 2020- July 2021 in Abu Dhabi
3	Ad5-nCoV: Beijing Institute of Biotechnology of the Academy of the military medical sciences.	Phase 3	Phase2	Moderate over 7 days: 74% had fever, pain and fatigue.	Wuhan, China Pakistan	Mar – Dec 2020 China in Sep 2020 – December 2021 In Pakistan
4	Corona vaccine sinovac	Phase 3	Phase 2	Mild in severity, pain at injection site.	2 in China; 12 In Brazil; Bandung, Indonesia	Jul 2020 – Oct 2021 in Brazil August 2020 – January 2021 In Bandung, Indonesia
5	BNT162 a1, b1, b2, c2 BioN Tech, fosun pharm, Pfizer	Phase 3	Phase 1 to phase 2	Dose-dependent and moderate including pain at the injection site, fatigue, headache, cold, muscle pain and joint pain, fever.	62 in the US, Germany	Apr 2020 – May 2021
6	mRNA-127 3 Moderna, NIAID, Bandra	Phase 3	Phase 1	fever, fatigue, headache, muscle ache, and pain at the injection site	89 in the US	Jul 2020 – Oct 2022
7	Gam-COVID-Vacc Gamaleya Research Institute of Epidemiology And Microbiology; Trade name: <i>Sputnik V</i>	Phase 3	Phase 1 to Phase 2	Pain at injection site, fever, headache, weakness, and muscle/joint pain.	Moscow	Aug 2020 – May 2021
8	Ad26.COVS2 Janssen pharmaceutical (Johnson & Johnson). BIDMC	Phase 3	Phase 1 to Phase 2	Injection site pain, fatigue, headache and myalgia	291 in US, Argentina, Brazil, Chile, Colombia, Mexico, Peru, Philippines, South Africa and Ukraine	Jul 2020 – 2023
9	Unnamed Anhui zhifei Longcom Biopharmaceutical co. Ltd.	Phase 2	Phase 1		Chongqing	Jun 2020- sep 2021
10	CVnCov cureVac, CEPI	Phase 2	Phase1		Ghent, 3 in Germany	Jun 2020- 2023
11	NVX-CoV2373 Novavax	Phase 2	Phase1	Short-duration, low grade, local pain, heachache, fatigue, myalgia	2 in Australia	May 2020-Jul 2021

This time there is no drug, vaccine or specific treatment or prevention for these non specific features of the disease. There are some covid-19 treatments

Remdesivir

Remdesivir is a prodrug of an adenosine triphosphate (ATP) analogue, with potential antiviral activity against a variety of RNA viruses. It is widely distributed in the human body is predominately eliminated renally. *Use of this drug for covid-19:-

Basically this drug is used for treatment of Ebola virus infection; the drug is not currently licensed globally for drug indication.^{[5][7]}

Favipiravir

Favipiravir is a pyrazine carboxamide derivative with activity against RNA viruses. Favipiravir is converted to the ribofuranosyltriphosphate derivative by host enzymes & selectively inhibits the influenza viral RNA-dependent RNA polymerase. It is also known as T-705. This drug is currently licensed in Japan for influenza & it is also effective for treating corona virus.^[8]

Tocilizumab treatment

Tocilizumab is the first marketed IL-6 blocking antibody through targeting IL-6-receptors & has proved its safety effectiveness for the therapy for rheumatoid arthritis.

The immune therapy strategy about tocilizumab treatment has been formally induced in the diagnosis & treatment program of covid-19 of the national health commission of China since 3rd March 2020. It is also known as atilumab, is an immunosuppressive drug.^[7]

Itolizumab

It is a 'first in a class' humanized IgG1 monoclonal antibody developed by Biocan & the center of molecular immunology, Flvona. It has proven to be an efficacious intervention in treating the serious hyperimmune response seen with covid-19.^[7]

Student participants

The survey was conducted for 20 days from 7th Oct 2020 to 26th Oct 2020 in India. The total participants for survey were 300 participants. They were asked some questions regarding which problems they faced in covid-19 pandemic and what changes did these pandemic bring into their lives and what types of hand-made and other types of precautions were taken by them in these pandemic. Also mention in that survey. The participants were kept confidential.

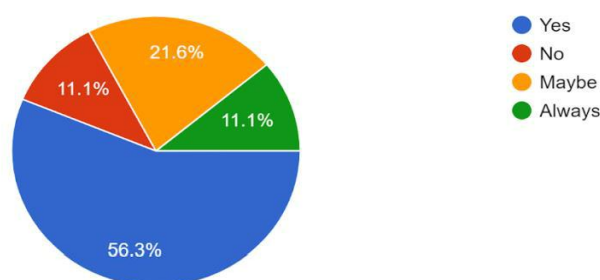
Study design

In these survey all the teenager adults all were involved and we got to know what problems they faced in their pandemic or what were the precautions were taking during their crucial time total 10 questions were asked to the candidate with different options and they have shared their experience which they have face during this pandemic.

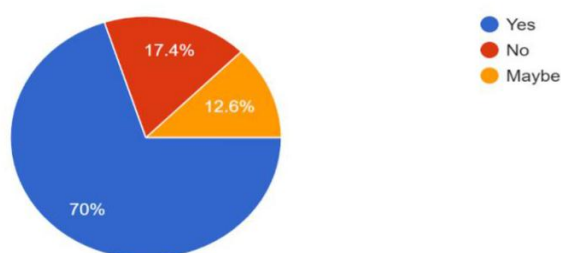
Statistical analysis

As per response 56.3 % students fell uncertain about their academic future or career. 70% of students' study is adversely affected by this pandemic. Vitamin tablets and immunity booster, supplements, exercise, homemade healthy food, healthy diet , milk with turmeric powder and warm water, vitamin c contained food were the home made precautions taken by the participants to boost up their immunity power. -12 % of participants were worried about their financial security amid lockdown. 42.8% of participants experienced emotions and mental break down. 72.5% of participants get addicted to social media mobile phones and laptop n all. The most suitable way to study is offline learning. 75.8% of them are agreed to one of them. 70% of them have helped to needed people in this crucial time. 55.3% of participants were afraid to visit to hospitals and clinics. 49.5% of them having irregular sleeping and eating pattern in this pandemic period.

Did you feel uncertain about your academic future or career?
208 responses



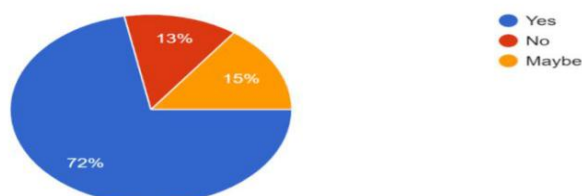
Do you feel that you're study is adversely affected by corona pandemic?
207 responses



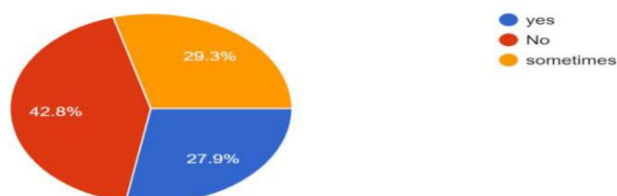
what precautions you were taking during this pandemic, to boost up your immunity power ?
199 responses



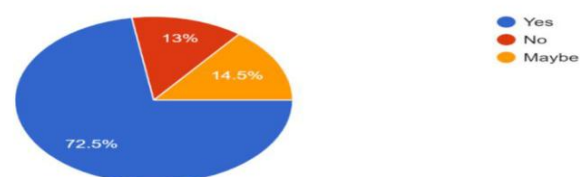
Do you feel worried about you financial security amid lock down?
207 responses



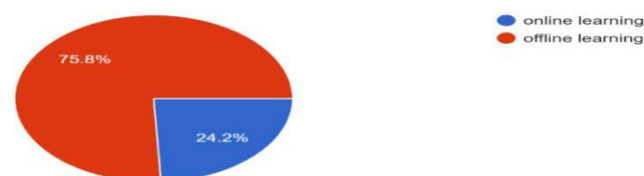
In last few months have you experienced any mental,nervous,emotional problem or on edge?
208 responses



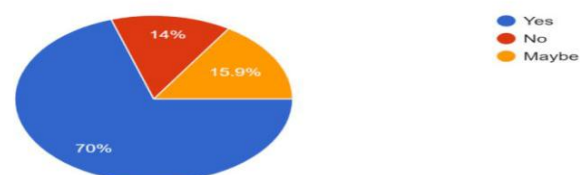
During this pandemic,did you feel more addicted to mobile phones,social media,laptops etc?
207 responses



what do you think which is more suitable study way ?
207 responses

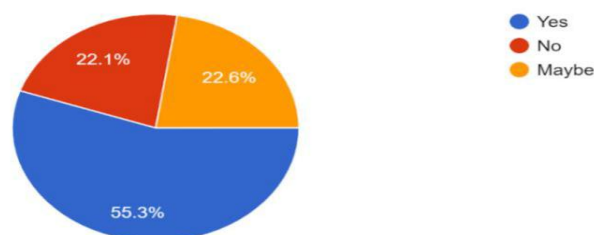


Did you help the needy people in this inadequate situation?
207 responses



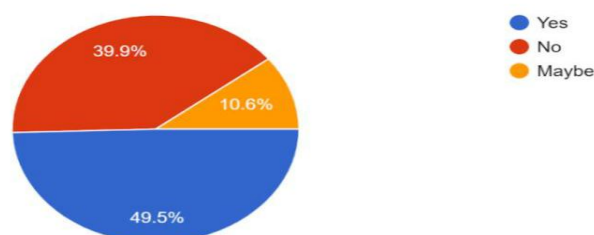
In this Covid 19 pandemic are you more afraid to visits Hospitals and clinics?

208 responses



During this pandemic do you have undergo irregular sleeping and eating patterns ?

208 responses



CONCLUSION

These covid 19 pandemic requirements the greatest global public wealth crisis of this generation and potentially, since this out breaks of this covid 19 pandemic.

Unfortunately, there are no vaccines available right now against the covid 19 or any any drug regimen for corona virus currently exists. But, a cocktail of antiviral agents may be more helpful in the treatment of this disease. So, here we have highlighted about vaccines from various countries which have also crossed phase 1, phase 2 of clinical trials and we also mentioned the effective drugs for the covid 19 which drugs are more effective and giving positive response to the patients. We have also taken a survey for 15 days so we come across what the participants have experienced in their critical time and what home made precautions has been taken by them during this pandemic.

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