

#### **REVIEW ARTICLE**

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# Problem Faced by People During Pandemic Condition -A Review

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#### **ABSTRACT**

Pandemic condition is an urgent awakening involving many countries because it has through to the fore the fragility of their healthcare. Lack of preparedness has unfortunately placed vulnerable a part of the population at greater risk, not just of constructing injection but also of spread of disease infection. Recently the whole world is affected by the pandemic condition -COVID 19. Due to this condition, many of us faced tons of problems like people cannot go their necessities, can not do their job so there's a fall in their economic level to neglect this sort of problem several methods should be taken. It's a challenge now to manage a worldwide office of individuals in their own homes. The technology we've now really does play up the opportunities, but it also highlights the prices and potential risks of individuals being atomized from their place of labor. The World Health Organization (WHO) assessed the outbreak as an epidemic to involve further coordinated attempts to decrease the medical and economic consequences of this pandemic as soon as possible. Defeating this pandemic is impossible without united and coordinated international attempts shaped by all countries of the planet. This article aims to convey the problem faced by common people during pandemic conditions.

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# **INTRODUCTION**

Pandemic is defined as "an epidemic occurring over a really wide area, crossing international boundaries, and typically affecting an outsized number of people [1]. Pandemics are large-scale that outbreaks the infectious diseases which could substantially increase morbidity and mortality over a good geographic place and cause massive monetary, social, and political disruption. Evidence shows that the likelihood of a pandemic has multiplied during the last century thanks to accelerated international journey and integration,

urbanization, changes in land use, and greater exploitation of the herbal environment [2]. Despite those enhancements, massive gaps and challenges exist in worldwide pandemic preparedness. Progress toward meeting the IHR has been choppy, and lots of countries were unable to satisfy simple necessities for compliance[3]. People affected thanks to pandemic conditions may suffer from tons of mental depression and fear that include the high death rate, resource and food insecurity, inequality, and knowledge with infected and sick individuals, which may cause some adverse

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psychological state outcomes during these epidemics[4][5].

Some of the Previous articles were referred, in of that one emphasis about the pandemic condition-Ebola virus-Multiple outbreaks, notably the 2014 West Africa Ebola epidemic, have exposed gaps associated with the timely detection of disease, availability of basic care, tracing of contacts, quarantine, and isolation procedures. preparedness outside the health sector, including global coordination and response mobilization[6][7]. Another pandemic condition is Spanish influenza in 1916, this resulted in more teenage people being affected than the labour force due to various reasons like in their academics, but most of the people died due exposure to influenza viruses[8][9]. The COVID-19 pandemic is likely to put healthcare professionals across the world in an unprecedented situation, to get the success they are working under a lot of pressure. These decisions may include how to allocate scant resources to equally needy patients, how to adjust their own physical and mental social insurance needs with those of patients. their longing and obligation to patients with those to loved ones, and how to give care to all seriously unwell patients with compelled or deficient assets. This may cause some to experience moral injury or mental health problems[10] [11][12]. Previously our team had conducted numerous clinical trials and lab studies and in-vitro studies [12–27] over the past 5 years. This article tries to emphasize the impact of the pandemic condition among people, some of the previous articles try to convey the same thing but not yet clear, some article discusses only the level of loss in the pandemic condition that is the impact of a pandemic on an economic level.

A review of scientific literature was done in preparation of the manuscript. The system and data-based searched for relevant articles from the PubMed and google scholar, About 50 articles were collected and analyzed, and reviewed. Databases of the journal were searching for articles based on the keyword pandemic condition impact of the pandemic condition, population economic impact due to pandemic condition cross-references were also included.

# Awareness about the pandemic condition

First, awareness about the pandemic condition should be passed via communication so that it can convey to everybody. It can be passed via social media because social media is one of the major networks which can pass the news worldwide in quarantine time[28] some of the preventive measures like wearing protective masks, vaccination, more creative precautions, and outbreaks are correlated to demand -measles, mumps, and rubella vaccines[29]. For some

pandemic conditions vaccines have been found, but COVID 19 that there is no vaccine has been found vet so the major cause is the spread of disease. To prevent from the disease since there is no vaccine certain preventive measure such as social distancing, isolating are the some of the methods which can prevent from disease[30]various analysis has been done and finally they conclude that spread of awareness, prompted the reduction of disease among the people, some article says that disease can spread via direct contact like shaking hands, etc this for some disease whereas some diseases can spread via indirect contact, [31]. One of the ways to reduce the spread of disease planning and coordination of the situation by monitoring and assessment[32]. Another way is by the social distance between people, Measures individual/household level measures[33]. The effects of social distancing are predominantly studied in the viewpoint of centrally controlled action[34]. Early phase public health efforts contain outbreaks([35]During this nutritional awareness is the most important thing [36][37]

### **Problem faced-poverty**

People affected by infectious diseases or disease causes due to deficiency in nutritional food [38]. This happens because of "no work" they won't get their wage/income so surely they won't get adequate food requirements so this is also one of the ways to get affected by the diseases [39]. Because of this person's behavioral changes causes fear, induced aversion in workplaces, other public gathering places, a primary cause of negative shocks to economic growth during a pandemic. [40]. During pandemic mitigation measures can cause significant social-economic disruption[41]. But the deaths associate with future pandemic shows greater in developing countries as well as in industrialized countries[42]It can likewise be incorporate need access, sufficient clinical consideration powerless general wellbeing frameworks, social factor lodging conditions, population density,- host factors, for example, nutritional status, co-existing medical conditions[43][44].

# **Economic level -Poverty line People**

As far as for all developing countries economic status is very much important to them. When it comes to poverty it is vice versa. Fastest growing economic level, poverty decreases the status in economics [45][46]. During pandemic conditions quarantine is important, so most people will suffer low income due to their economic status in society. As for as considered COVID -19 quarantine condition affect the people, Due to Unemployment Rate there is expanded almost 19% inside in month,

reaching 26% joblessness across India, concurring Center for Monitoring Indian Economy Nearly 140,000,000 (14 crores) Indian lost work during the lockdown and over 45% families across the nation over have detailed a salary drop when contrasted with the earlier year. Day to day life, money is the most important requirement for every one. The same money has many negative aspects too. Money is found to play a very vital role in transmitting diseases.

#### Pandemic condition

Most diseases that cause the pandemic condition spread are only by animals, birds not from any other sources. The word pandemics originated through the -zoonotic transmission - pathogenic animal, humans [47]. So some people are potentially exposed to the world to control the spread of diseases[48]. So several tests have been done to them to detect the test, people who are suspected to have been isolated and treated, of all affected countries done this initially the spread can be controlled in community transmission[49][50] The word pandemic is due to an outbreak of infectious diseases that results from in significant economic, social, -political disruption[51][52]

### **Challenges to overcome**

To overcome the challenge in pandemic conditions, several methods have to been taken every country that is affected by ted countries should provide better medical care. But due to fear of the spread of diseases, there was a lack of medical and public health centers. By characterizing pandemic risk identifying gaps has been pandemic preparedness is essential to prioritizing, targeting the capacity[53][54]that provide relevant public health information and countries which has vulnerable populations, the decision taken by the government should be informed [55]such kind of appropriate action will protect the people and minimum the social disruption[56][57][58]

### Measure of government

There were several measures taken by the government during the pandemic condition, they provide the basic needs like food to the poor people because due to the lockdown condition they won't get income[59][60]water is one of essential need during pandemic even water cannot be affordable to people [61]. The duty that they have in advancing preferable way of life is more noteworthy over before as the way of life is continually changing a ton and it represents a genuine danger to society these days as we face a ton of trouble in overseeing wellbeing issues and mental unsettling influences because of the unfortunate ill-advised dietary patterns. Building the pandemic situational Awareness was complex, which required

coordination of the public-private sector across the country.COVID 19 pandemic condition causes the opportunities takeover acquiescence by India.Government announcing the lift of prioritized over livelihood when later changed on equal importance being life livelihood. [62]

The limitation of this article is that it cannot discuss all the problems faced by the people during pandemic conditions. The future scope of this topic, some preventative measures should be taken initially so that there will be no loss in the economic level as people are affected.

#### **CONCLUSION**

Unlike the most natural disaster, pandemic is a geographically and damaging event. There are strong ethics in global health in building capacity to detect the response to pandemic threats. The public organization should give awareness about the pandemic condition as well the government should take some initial preventive measures. Our job is to clearly define these problems and evaluate potential solutions. For each problem, we identify needs, resources, priorities, and obstacles. The process is often complex; even if we identify a theoretically optimal solution, successful implementation requires stakeholder support and overcoming financial, legal, or institutional obstacles. This is, fortunately, a time when many stakeholders are willing to cooperate; our challenge is to use this opportunity to help achieve both short and long term goals. Most people see the pandemic as a unique problem that requires special solutions. To planners, it presents a complex set of economic, health, equity, and environmental problems that should be addressed in ways that are consistent with other community goals. More comprehensive analysis helps identify truly optimal solutions.

### **AUTHOR CONTRIBUTION**

The idea was conceptualized by Lakshminarayanan Arivarasu, collection of the literature, and drafting the manuscript was by Kavya Shree, revising the manuscript for publication was done by Leslie rani.

### **CONFLICT OF INTEREST**

The authors declare no conflict of interest

### **REFERENCE**

- Porta MS, Greenland S, Hernán M, dos Santos Silva I, Last JM. A Dictionary of Epidemiology [Internet]. Oxford University Press; 2014. 343 p. Available from: https://books.google.com/books/about/A\_D ictionary\_of\_Epidemiology.html?hl=&id=3ck VDAAAQBAJ
- 2. Jones KE, Patel NG, Levy MA, Storeygard A, Balk D, Gittleman JL, et al. Global trends in

- emerging infectious diseases. Nature [Internet]. 2008 Feb 21;451(7181):990-3. Available from: http://dx.doi.org/10.1038/nature06536
- 3. Katz R, Sorrell EM, Kornblet SA, Fischer JE. Global Health Security Agenda and the International Health Regulations: Moving Forward [Internet]. Vol. 12, Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science. 2014. p. 231–8. Available from: http://dx.doi.org/10.1089/bsp.2014.0038
- 4. Webster RK, Brooks SK, Smith LE, Woodland L, Wessely S, Rubin GJ. How to improve adherence with quarantine: rapid review of the evidence. Public Health [Internet]. 2020 May;182:163–9. Available from: http://dx.doi.org/10.1016/j.puhe.2020.03.0 07
- Ezhilarasan D. Oxidative stress is bane in chronic liver diseases: Clinical and experimental perspective [Internet]. Vol. 19, Arab Journal of Gastroenterology. 2018. p. 56-64. Available from: http://dx.doi.org/10.1016/j.ajg.2018.03.002
- 6. Moon S, Sridhar D, Pate MA, Jha AK, Clinton C, Delaunay S, et al. Will Ebola change the game? Ten essential reforms before the next pandemic. The report of the Harvard-LSHTM Independent Panel on the Global Response to Ebola. Lancet [Internet]. 2015 Nov 28;386(10009):2204–21. Available from: http://dx.doi.org/10.1016/S0140-6736(15)00946-0
- Pathmanathan I, O'Connor KA, Adams ML, Rao CY, Kilmarx PH, Park BJ, et al. Rapid assessment of Ebola infection prevention and control needs--six districts, Sierra Leone, October 2014. MMWR Morb Mortal Wkly Rep [Internet]. 2014 Dec 12;63(49):1172-4. Available from: https://www.ncbi.nlm.nih.gov/pubmed/255 03922
- 8. Phillips H. The local state and public health reform in South Africa: Bloemfontein and the consequences of the Spanish 'flu epidemic of 1918 [Internet]. Vol. 13, Journal of Southern African Studies. 1987. p. 210–33. Available from: http://dx.doi.org/10.1080/03057078708708142
- 9. Menon S, Ks SD, R S, S R, S VK. Selenium nanoparticles: A potent chemotherapeutic agent and an elucidation of its mechanism. Colloids Surf B Biointerfaces [Internet]. 2018 Oct 1;170:280–92. Available from: http://dx.doi.org/10.1016/j.colsurfb.2018.0 6.006
- 10. Fear NT, Reed RV, Rowe S, Burdett H, Pernet D, Mahar A, et al. Impact of paternal

- deployment to the conflicts in Iraq and Afghanistan and paternal post-traumatic stress disorder on the children of military fathers. Br J Psychiatry [Internet]. 2018 Jun;212(6):347–55. Available from: http://dx.doi.org/10.1192/bjp.2017.16
- Lakshmi T, Ezhilarasan D, Nagaich U, Vijayaragavan R. Acacia catechu Ethanolic Seed Extract Triggers Apoptosis of SCC-25 Cells. Pharmacogn Mag [Internet]. 2017 Oct;13(Suppl 3):S405-11. Available from: http://dx.doi.org/10.4103/pm.pm\_458\_16
- Rajeshkumar S, Kumar SV, Ramaiah A, Agarwal H, Lakshmi T, Roopan SM. Biosynthesis of zinc oxide nanoparticles usingMangifera indica leaves and evaluation of their antioxidant and cytotoxic properties in lung cancer (A549) cells. Enzyme Microb Technol [Internet]. 2018 Oct;117:91–5. Available from: http://dx.doi.org/10.1016/j.enzmictec.2018. 06.009
- 13. Robert R, Justin Raj C, Krishnan S, Jerome Das S. Growth, theoretical and optical studies on potassium dihydrogen phosphate (KDP) single crystals by modified Sankaranarayanan-Ramasamy (mSR) method [Internet]. Vol. 405, Physica B: Condensed Matter. 2010. p. 20–4. Available from: http://dx.doi.org/10.1016/j.physb.2009.08.0 15
- 14. Sahu D, Kannan GM, Vijayaraghavan R. Size-dependent effect of zinc oxide on toxicity and inflammatory potential of human monocytes. J Toxicol Environ Health A [Internet]. 2014;77(4):177–91. Available from: http://dx.doi.org/10.1080/15287394.2013.8 53224
- 15. Suresh P, Marimuthu K, Ranganathan S, Rajmohan T. Optimization of machining parameters in turning of Al-SiC-Gr hybrid metal matrix composites using grey-fuzzy algorithm [Internet]. Vol. 24, Transactions of Nonferrous Metals Society of China. 2014. p. 2805–14. Available from: http://dx.doi.org/10.1016/s1003-6326(14)63412-9
- 16. DeSouza SI, Rashmi MR, Vasanthi AP, Joseph SM, Rodrigues R. Mobile phones: the next step towards healthcare delivery in rural India? PLoS One [Internet]. 2014 Aug 18;9(8):e104895. Available from: http://dx.doi.org/10.1371/journal.pone.010 4895
- 17. Sekhar CH, Narayanan V, Baig MF. Role of antimicrobials in third molar surgery: prospective, double blind,randomized, placebo-controlled clinical study. Br J Oral

- Maxillofac Surg [Internet]. 2001 Apr;39(2):134–7. Available from: http://dx.doi.org/10.1054/bjom.2000.0557
- Chellaswamy C, Ramesh R. Parameter extraction of solar cell models based on adaptive differential evolution algorithm [Internet]. Vol. 97, Renewable Energy. 2016. p. 823–37. Available from: http://dx.doi.org/10.1016/j.renene.2016.06. 024
- Danda AK, Muthusekhar MR, Narayanan V, Baig MF, Siddareddi A. Open versus closed treatment of unilateral subcondylar and condylar neck fractures: a prospective, randomized clinical study. J Oral Maxillofac Surg [Internet]. 2010 Jun;68(6):1238-41. Available from: http://dx.doi.org/10.1016/j.joms.2009.09.04
- 20. Samuel MS, Bhattacharya J, Raj S, Santhanam N, Singh H, Pradeep Singh ND. Efficient removal of Chromium(VI) from aqueous solution using chitosan grafted graphene oxide (CS-GO) nanocomposite. Int J Biol Macromol [Internet]. 2019 Jan;121:285–92. Available from: http://dx.doi.org/10.1016/j.ijbiomac.2018.0 9.170
- 21. Lakshmanan A, Bhaskar RS, Thomas PC, Satheesh Kumar R, Siva Kumar V, Jose MT. A red phosphor for nUV LED based on (Y,Gd)BO3:Eu3 [Internet]. Vol. 64, Materials Letters. 2010. p. 1809–12. Available from: http://dx.doi.org/10.1016/j.matlet.2010.05. 034
- 22. Venu H, Subramani L, Dhana Raju V. Emission reduction in a DI diesel engine using exhaust gas recirculation (EGR) of palm biodiesel blended with TiO2 nano additives [Internet]. Vol. 140, Renewable Energy. 2019. p. 245–63. Available from: http://dx.doi.org/10.1016/j.renene.2019.03. 078
- 23. Manimaran G, Pradeep kumar M, Venkatasamy R. Influence of cryogenic cooling on surface grinding of stainless steel 316 [Internet]. Vol. 59, Cryogenics. 2014. p. 76–83. Available from: http://dx.doi.org/10.1016/j.cryogenics.2013 .11.005
- 24. Neelakantan P, Varughese AA, Sharma S, Subbarao CV, Zehnder M, De-Deus G. Continuous chelation irrigation improves the adhesion of epoxy resin-based root canal sealer to root dentine. Int Endod J [Internet]. 2012 Dec;45(12):1097–102. Available from: http://dx.doi.org/10.1111/j.1365-2591.2012.02073.x
- 25. Babu MN, Naresh Babu M, Muthukrishnan N.

- Investigation on Surface Roughness in Abrasive Water-Jet Machining by the Response Surface Method [Internet]. Vol. 29, Materials and Manufacturing Processes. 2014. p. 1422–8. Available from: http://dx.doi.org/10.1080/10426914.2014.9 52020
- 26. Panda S, Doraiswamy J, Malaiappan S, Varghese SS, Del Fabbro M. Additive effect of autologous platelet concentrates in treatment of intrabony defects: a systematic review and meta-analysis. J Investig Clin Dent [Internet]. 2016 Feb;7(1):13–26. Available from: http://dx.doi.org/10.1111/jicd.12117
- 27. Adalarasan R, Santhanakumar M, Rajmohan M. Optimization of laser cutting parameters for Al6061/SiCp/Al2O3 composite using grey based response surface methodology (GRSM) [Internet]. Vol. 73, Measurement. 2015. p. 596–606. Available from: http://dx.doi.org/10.1016/j.measurement.2 015.06.003
- 28. Ferguson N. Capturing human behaviour. Nature [Internet]. 2007 Apr 12;446(7137):733. Available from: http://dx.doi.org/10.1038/446733a
- 29. Philipson T. Private Vaccination and Public Health: An Empirical Examination for U.S. Measles [Internet]. Vol. 31, The Journal of Human Resources. 1996. p. 611. Available from: http://dx.doi.org/10.2307/146268
- 30. Hatchett RJ, Mecher CE, Lipsitch M. Public health interventions and epidemic intensity during the 1918 influenza pandemic. Proc Natl Acad Sci U S A [Internet]. 2007 May 1;104(18):7582–7. Available from: http://dx.doi.org/10.1073/pnas.061094110 4
- 31. Eubank S, Guclu H, Kumar VSA, Marathe MV, Srinivasan A, Toroczkai Z, et al. Modelling disease outbreaks in realistic urban social networks. Nature [Internet]. 2004 May 13;429(6988):180–4. Available from: http://dx.doi.org/10.1038/nature02541
- 32. Brankston G, Gitterman L, Hirji Z, Lemieux C, Gardam M. Transmission of influenza A in human beings. Lancet Infect Dis [Internet]. 2007 Apr;7(4):257–65. Available from: http://dx.doi.org/10.1016/S1473-3099(07)70029-4
- 33. Weinstein RA, Bridges CB, Kuehnert MJ, Hall CB. Transmission of Influenza: Implications for Control in Health Care Settings [Internet]. Vol. 37, Clinical Infectious Diseases. 2003. p. 1094–101. Available from: http://dx.doi.org/10.1086/378292
- 34. Weekly CCDRC, Collective Commun Dis Rep CDR weekly. First outbreak of influenza in the United Kingdom this season hits Orkney

- [Internet]. Vol. 3, Weekly releases (1997–2007). 1999. Available from: http://dx.doi.org/10.2807/esw.03.40.01325-en
- 35. Halfmann P, Neumann G, Feldmann H, Kawaoka Y. Ebola Conquers West Africa More to Come? [Internet]. Vol. 1, EBioMedicine. 2014. p. 2–3. Available from: http://dx.doi.org/10.1016/j.ebiom.2014.10.0 04
- 36. Bano AM, Vishnupriya V, Gayathri R. Nutritional awareness among Adolescents [Internet]. Vol. 9, Research Journal of Pharmacy and Technology. 2016. p. 898. Available from: http://dx.doi.org/10.5958/0974-360x.2016.00171.2
- 37. Rajeshkumar S, Agarwal H, Venkat Kumar S, Lakshmi T. Brassica oleracea Mediated Synthesis of Zinc Oxide Nanoparticles and its Antibacterial Activity against Pathogenic Bacteria [Internet]. Vol. 30, Asian Journal of Chemistry. 2018. p. 2711–5. Available from: http://dx.doi.org/10.14233/ajchem.2018.21 562
- 38. World Health Organization. Manual for the Laboratory Diagnosis and Virological Surveillance of Influenza [Internet]. 2011. 139 p. Available from: https://books.google.com/books/about/Manual\_for\_the\_Laboratory\_Diagnosis\_and.html? hl=&id=kYajuAAACAAJ
- 39. World Health Organization. International Health Regulations (2005) [Internet]. World Health Organization; 2008. 74 p. Available from: https://books.google.com/books/about/International\_Health\_Regulations\_2005.html?hl=&id=YRBoCh3ErrYC
- 40. Dimitrov NB, Goll S, Hupert N, Pourbohloul B, Meyers LA. Optimizing tactics for use of the U.S. antiviral strategic national stockpile for pandemic influenza. PLoS One [Internet]. 2011 Jan 19;6(1):e16094. Available from: http://dx.doi.org/10.1371/journal.pone.001 6094
- 41. Dunn MJ. From Genome to Proteome: Advances in the Practice and Application of Proteomics [Internet]. John Wiley & Sons; 2008. 552 p. Available from: https://play.google.com/store/books/details?id=VY0AQYWDLCcC
- 42. Ravallion M, Chen S, Sangraula P. New Evidence on the Urbanization of Global Poverty [Internet]. Vol. 33, Population and Development Review. 2007. p. 667–701. Available from: http://dx.doi.org/10.1111/j.1728-4457.2007.00193.x

- 43. Malik M, World Health Organization, Mahjour J, Khan W, Alwan A, World Health Organization, et al. Influenza in the Eastern Mediterranean Region: identifying the unknowns for detection and control of epidemic and pandemic threats [Internet]. Vol. 22, Eastern Mediterranean Health Journal. 2016. p. 428–9. Available from: http://dx.doi.org/10.26719/2016.22.7.428
- 44. Karthiga P, Rajeshkumar S, Annadurai G. Mechanism of Larvicidal Activity of Antimicrobial Silver Nanoparticles Synthesized Using Garcinia mangostana Bark Extract [Internet]. Vol. 29, Journal of Cluster Science. 2018. p. 1233–41. Available from: http://dx.doi.org/10.1007/s10876-018-1441-z
- 45. Daly J. Evidence-Based Medicine and the Search for a Science of Clinical Care [Internet]. Univ of California Press; 2005. 290 p. Available from: https://play.google.com/store/books/details?id=dyrig18gpbMC
- 46. Mehta M, Deeksha, Tewari D, Gupta G, Awasthi R, Singh H, et al. Oligonucleotide therapy: An emerging focus area for drug delivery in chronic inflammatory respiratory diseases. Chem Biol Interact [Internet]. 2019 Aug 1;308:206–15. Available from: http://dx.doi.org/10.1016/j.cbi.2019.05.028
- 47. Lin JC, Nichol KL. Excess mortality due to pneumonia or influenza during influenza seasons among persons with acquired immunodeficiency syndrome. Arch Intern Med [Internet]. 2001 Feb 12;161(3):441–6. Available from: http://dx.doi.org/10.1001/archinte.161.3.44
- 48. Murphy FA. Emerging zoonoses. Emerg Infect Dis [Internet]. 1998 Jul;4(3):429–35. Available from: http://dx.doi.org/10.3201/eid0403.980324
- 49. Morse SS. Factors in the emergence of infectious diseases. Emerg Infect Dis [Internet]. 1995 Jan;1(1):7–15. Available from:
  - http://dx.doi.org/10.3201/eid0101.950102
- Gheena S, Ezhilarasan D. Syringic acid triggers reactive oxygen species-mediated cytotoxicity in HepG2 cells [Internet]. Vol. 38, Human & Experimental Toxicology. 2019. p. 694–702. Available from: http://dx.doi.org/10.1177/0960327119839 173
- 51. Anderson RM, Fraser C, Ghani AC, Donnelly CA, Riley S, Ferguson NM, et al. Epidemiology, transmission dynamics and control of SARS: the 2002-2003 epidemic. Philos Trans R Soc Lond B Biol Sci [Internet]. 2004 Jul

- 29;359(1447):1091–105. Available from: http://dx.doi.org/10.1098/rstb.2004.1490
- 52. Ezhilarasan D, Lakshmi T, Vijayaragavan R, Bhullar S, Rajendran R. Acacia catechu ethanolic bark extract induces apoptosis in human oral squamous carcinoma cells [Internet]. Vol. 8, Journal of Advanced Pharmaceutical Technology & Research. 2017. p. 143. Available from: http://dx.doi.org/10.4103/japtr.japtr\_73\_17
- Hapsara HR. World Health Organization (WHO): Global Health Situation [Internet]. Encyclopedia of Statistical Sciences. 2005. p. 1–8. Available from: http://dx.doi.org/10.1002/0471667196.ess7 232
- 54. Perumalsamy H, Sankarapandian K, Veerappan K, Natarajan S, Kandaswamy N, Thangavelu L, et al. In silico and in vitro analysis of coumarin derivative induced anticancer effects by undergoing intrinsic pathway mediated apoptosis in human stomach cancer. Phytomedicine [Internet]. 2018 Jul 15;46:119–30. Available from: http://dx.doi.org/10.1016/j.phymed.2018.0 4.021
- 55. Ijaz MK, Sattar SA, Johnson-Lussenburg CM, Springthorpe VS, Nair RC. Effect of relative humidity, atmospheric temperature, and suspending medium on the airborne survival of human rotavirus. Can J Microbiol [Internet]. 1985 Aug;31(8):681–5. Available from: http://dx.doi.org/10.1139/m85-129
- 56. Marks PJ, Vipond IB, Carlisle D, Deakin D, Fey RE, Caul EO. Evidence for airborne transmission of Norwalk-like virus (NLV) in a hotel restaurant [Internet]. Vol. 124, Epidemiology and Infection. 2000. p. 481–7. Available from: http://dx.doi.org/10.1017/s0950268899003 805

- 57. Anitha R, Ashwini S. Antihyperglycemic activity of Caralluma fimbriata: An In vitro approach [Internet]. Vol. 13, Pharmacognosy Magazine. 2017. p. 499. Available from: http://dx.doi.org/10.4103/pm.pm\_59\_17
- 58. Ezhilarasan D, Sokal E, Najimi M. Hepatic fibrosis: It is time to go with hepatic stellate cell-specific therapeutic targets. Hepatobiliary Pancreat Dis Int [Internet]. 2018 Jun;17(3):192–7. Available from: http://dx.doi.org/10.1016/j.hbpd.2018.04.0 03
- 59. Muyembe T, Kipasa M. Ebola haemorrhagic fever in Kikwit, Zaire [Internet]. Vol. 345, The Lancet. 1995. p. 1448. Available from: http://dx.doi.org/10.1016/s0140-6736(95)92640-2
- 60. Sharma P, Mehta M, Dhanjal DS, Kaur S, Gupta G, Singh H, et al. Emerging trends in the novel drug delivery approaches for the treatment of lung cancer. Chem Biol Interact [Internet]. 2019 Aug 25;309:108720. Available from: http://dx.doi.org/10.1016/j.cbi.2019.06.033
- Lakshmi T, Krishnan V, Rajendran R, Madhusudhanan N. Azadirachta indica: A herbal panacea in dentistry - An update [Internet]. Vol. 9, Pharmacognosy Reviews. 2015. p. 41. Available from: http://dx.doi.org/10.4103/0973-7847.156337
- 62. Ashwini S, Ezhilarasan D, Anitha R. Cytotoxic Effect of Caralluma fimbriata Against Human Colon Cancer Cells [Internet]. Vol. 9, Pharmacognosy Journal. 2017. p. 204–7. Available from: http://dx.doi.org/10.5530/pj.2017.2.34