Comparing the socio-economic implications of the 1918 Spanish flu and the COVID-19 pandemic in India: A systematic review of literature

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Introduction

The growth and development of an economy are prone to shocks, which may occur because of a change in the society, political economy, environment, etc. These shocks have an outreaching impact on any economy (Brainerd and Seigler 2003; Karlsson *et al*. 2014). Epidemic diseases also have an adverse shock on the economy, as these hamper not only the health of the public, but also the health of the economy. History provides incidences of pandemics, epidemics, and diseases that have occurred in the past, making long-lasting impacts on the lives of people as well as economic activities (Boxmeyer 2006; Killingray 2003). Various nations along with India were impacted by one such pandemic in the year 1918, when the influenza pandemic hit the globe (García-Sastre and Whitley 2006; Gottfredsson *et al*. 2008; Karesh and Cook 2005).

The 1918 influenza pandemic was an extremely lethal influenza pandemic caused by H1N1 virus. It was one of the most widespread and deadliest flus that has been witnessed by world economies, which hampered not only lives, but society and trade-related activities. (Fargey 2019; Karlsson *et al*. 2014). Data from the World Economic Forum (WEF) suggests that approximately 500 million people were infected by the influenza – a third of the world's population at the time. The pandemic emerged in four successive waves between the period of February 1918 and April 1920. The death rate was estimated to be 2 per cent of the global population and 5.2 per cent of the population in India (World Economic Forum Report 2020). Though the 1918 influenza pandemic was coupled with the First World War, Figure 1 shows the plague mortality in India:

Reyes *et al*. (2018) suggested that the 1918 influenza pandemic entered India by sea route, when the armies returned from European countries after the First World War. As suggested by the Census of India (1921), approximately 8.5 million people in India lost their lives because

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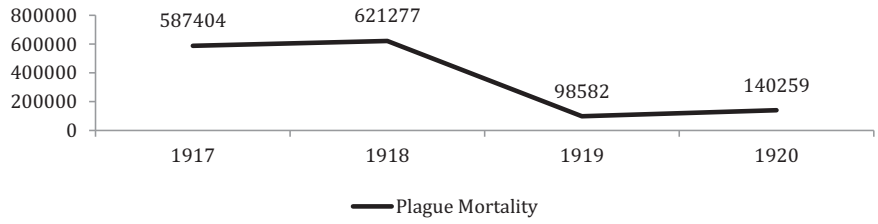


Figure 1. Plague mortality rate in British India and provinces

of the pandemic. Lack of advanced healthcare facilities and lack of technological developments made the situation a lot more critical (Michaela and Kindrachuk 2019; Schoch-Spana 2001).

India and the countries across the world are facing another deadly virus, which is said to have its origin in the city of Wuhan of the People's Republic of China, where the first case was found in December 2019 (Ali and Alharbi 2020). The coronavirus disease-2019 (COVID-19) is a disease caused by severe acute coronavirus 2 respiratory syndrome (SARS-CoV-2). COVID-19 symptoms are variable, but frequently include fever, cough, weakness, trouble in breathing, and loss of smell and taste. Currently, reported cases are 71 million with almost 2.13 million deaths worldwide (WHO Covid-19 Database 2021).[1] The deadly novel coronavirus disease has brought the global economies to a standstill. As suggested by Wijdicks (2020), COVID-19 and the 1918 influenza pandemic are similar in pattern, as the disease presentation is comparable; however, at the same time, both have dissimilarities too. Both are respiratory diseases that range from asymptomatic or mild symptoms leading to severe death depending on the case. In addition, both of them are contagious in nature through fomites and droplets, yet the speed of transmission and the nature of each virus's reproductiveness are different.

Comparison between both the pandemics and the two periods – 1918 and 2020 – very clearly indicates similarities, such as shortcomings in medical infrastructure and unavailability of vaccines, which catered to the sustenance of the virus (Barro *et al*. 2020; Jakob 2020; Virmani and Bhasin 2020). Both the pandemics also impacted the societies and the economies negatively and it is suggested to have widened the bridge between the rich and the poor; where the rich are becoming richer and the poor are becoming poorer (Bennett and Carney 2010; Buheji *et al*. 2020; Singh and Misra 2020).

Thus, the objective of the current study is to compare and assess the socio-economic impact of the COVID-19 pandemic and the 1918 influenza pandemic in India. The researchers aim to provide solutions to the society and the economy to combat the deadly COVID-19 virus. The structure of the research paper includes a brief outline of the applied methodology of a systematic literature review by the researchers, followed by a detailed synthesis of the literature. The final section summarises the findings, which are complemented by the researchers' recommendations.

Research methodology

COVID-19 as well as the influenza pandemic of 1918 are both lethal and have a lot in common. Though the COVID-19 outbreak has not caused as many deaths as the influenza pandemic of 1918, the lessons learnt from it in economics, policy, finances, health, and mortality can help in managing the effects of today's coronavirus pandemic. Thus, a comparative study of the two pandemics is necessary.

For the comparative analysis, the researchers have adopted the method of systematic literature review (SLR), which is one of the ways of studying extant literature to understand the topic of a discipline through this well-organised and efficient procedure. In SLRs, the researchers try to identify, critically analyse, and summarise the existing research evidence concerning a clearly defined problem. In the current study, the researchers are focusing mainly on the following:

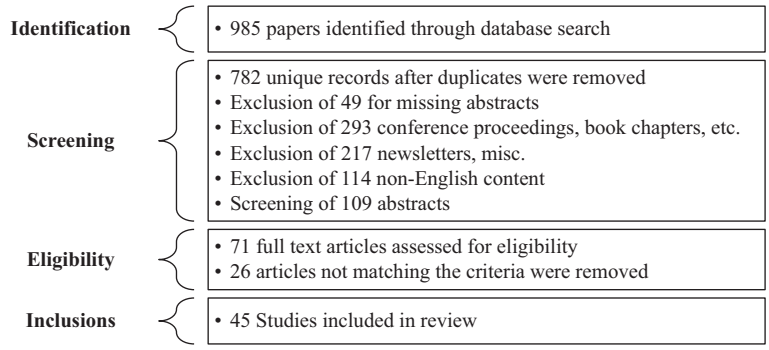


FIGURE 2. Graphical representation of search strategy for SLR

- To compare the socio-economic implications of the 1918 influenza pandemic and COVID-19 pandemic;
- Pandemic mitigation measures adopted by India to boost its economy;
- Measures to improve the socio-economic conditions of India and other developing nations to overcome the COVID-19 pandemic.

The researchers have presented this study by following the process of systematic review of literature and by identifying and referring to relevant literature.

Search Strategy and Inclusion-Exclusion Criteria

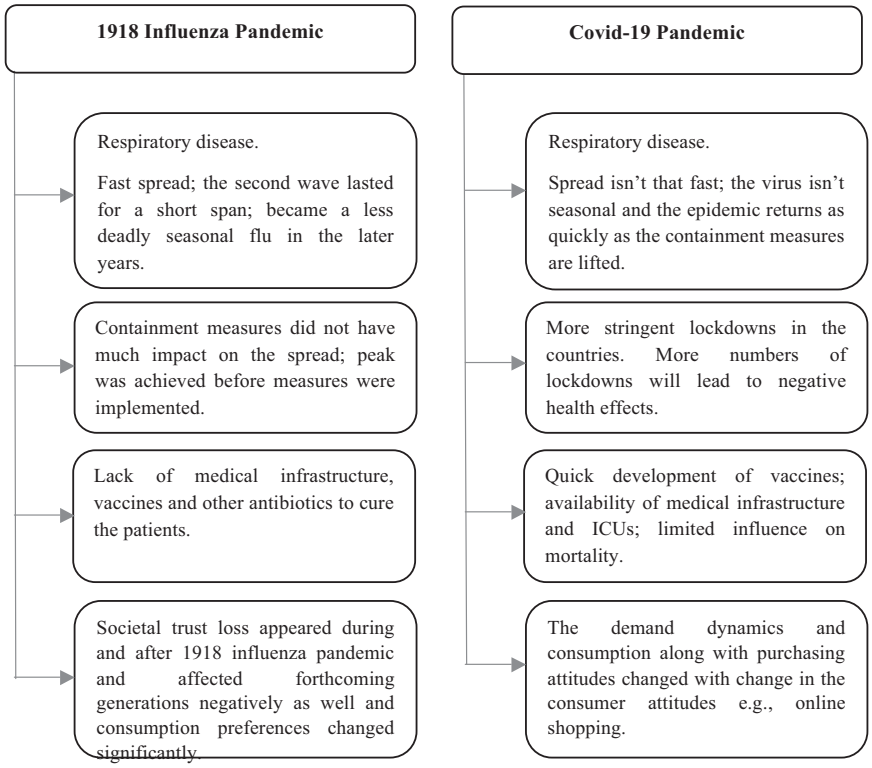
The search strategy for the SLR has been depicted in Figure 2. In the first step, the researchers extracted scholarly articles and included EBSCOhost Research Database, Emerald Insights, Google Scholar, JStor, Sage Journals, Science Direct (Elsevier), Scopus, and Web of Science, among others. In each of the abovementioned databases, the researchers used a combination of keywords such as "1918 pandemic", "influenza pandemic", "1918 influenza pandemic", "influenza pandemic in India", "Spanish Flu", "Spanish Flu in India", "impact of Spanish flu on economy", "history of 1918 influenza pandemic", "Spanish flu and its effect on Indian economy", "healthcare systems and Spanish flu", "Spanish Flu in developing economies", "Covid-19 in India", "Covid-19 in developing countries", "socio-economic implications of Covid-19", 'Covid-19 healthcare crisis", among others. The search yielded more than 500 articles, however, a total of 45 research articles have been included in the systematic literature review. A total of 45 research articles were taken into consideration for the SLR. Most of the research papers included in the study are from recent times; however, older articles have also been included in order to understand the development and phenomenon of the 1918 influenza pandemic in a better manner.

In the second step, duplicate articles were removed and initial screening of the abstracts was carried out. Book chapters and articles of non-academic nature, articles from magazine, interviews, newsletters, editorials, and viewpoints were excluded for the review. Scholarly research articles related to the topic have been added in order to compare the situation of India during the two pandemics. Further, the language filter for "English" was used to fetch the research articles. In the third step, 26 articles not matching the criteria were removed, and a total of 45 research articles were taken into consideration for the SLR. In the upcoming section, findings from the literature have been summarised.

Findings from systematic review of literature

In this section, the researchers have compiled the findings after reviewing the literature. This section has been divided into four subsections: comparison of 1918 influenza and COVID-19 pandemics in a global context; economic consequences of a pandemic in India; social consequences of a pandemic in India; and the pandemic mitigation measures adopted by India.

TABLE 1. Comparison of 1918 influenza pandemic and COVID-19 pandemic



Source: Review of literature

Comparison of 1918 influenza and COVID-19 pandemics in global context

A pandemic is a global issue, and from a global perspective, it is important to consider pan-level preparedness; however, both underdeveloped and developing nations face complex and complicated issues and obstacles during the pandemic (Bell *et al*. 2009; Gerard Imbert and Orkin 2020; Singh and Mishra 2020). Global economies during both the pandemics witnessed a shortage of healthcare facilities and medical practitioners; hospitals become overcrowded with patients and makeshift hospitals are created (Barro, Ursua and Weng 2020; Chandra 2013; Curson and McCracken 2006; Gealogo 2009; Jakob 2020). Comparison of 1918 influenza and the COVID-19 pandemics is given in Table 1.

Table 1 has been compiled with the help of extant literature. Though both the pandemics are respiratory diseases, they shook the very foundation of global economies (Aassve *et al*. 2020). In most of the countries, the second wave of the 1918 influenza pandemic occurred in the last few months of 1918 and proved to be the deadliest; however, it became a seasonal flu later and less deadly (Chandra 2013; Spreeuwenberg, Kroneman and Paget 2018). Containment measures during the influenza pandemic had little impact on its spread as its peak was achieved before measures could be implemented; however, COVID-19 is not a seasonal flu and it returns as soon as the containment measures are lifted (Buheji *et al*. 2020; Spreeuwenberg, Kroneman and Paget 2018). More lockdowns are expected to have negative health and economic effects (Ali and Alharbi 2020; Jakob 2020). Unlike the 1918 influenza, the nature and intensity of COVID-19 within countries and regions varies over time (Ojo 2020).

Treatment regarding added infections was not possible in 1918; as the medical system in developing countries was not well-equipped with the necessary vaccinations, antibiotics, or antivirals;

however, in recent years, nations have advanced in terms of technology as well as health infrastructure to deal with the pandemics (Ali and Alharbi 2020; Jakob 2020). According to Schoch-Spana (2001), Mukherjea (2010), and Scanlon and McMohan (2011), this is a difficult logistical challenge being faced by many developing nations and might hinder the provision of adequate medical care for patients with pandemic influenza. However, the advancement in technology and improved healthcare facilities such as ICUs have prevented excess mortality, and have helped nations to introduce vaccines against COVID-19.

Vaccines are generally available by developed nations and developing nations have to rely on the vaccines developed by high-income developed countries to fight any pandemic. However, it is crucial for developing nations to develop their healthcare systems to reduce mortality and morbidity rates (Chandra 2013; Gealogo 2009; Jakob 2020; Rosner 2010). Even today, not many developing nations have the finances to meet their own basic medical necessities (Delivorias and Scholz 2020).

The loss of societal trust that appeared during and after the 1918 influenza pandemic affected forthcoming generations negatively, and consumption preferences changed significantly (Aassve *et al*. 2020). From a macroeconomic perspective, consumption and services, demand and their supplies are directly attached, and a fall in overall demand leads to a decline in overall supplies (Fan 2003). Female labourers were hurt severely with discrimination in the job market (Ceylan, Ozkan and Mulazimogullari 2020). The demand dynamics and consumption along with purchasing attitudes changed with change in the consumer attitudes, e.g., online shopping (Ceylan, Ozkan and Mulazimogullari 2020). A utilitarian welfare maximisation approach was used to forecast the trade-off between death toll, life expectancy, and consumption differences (Hall *et al*. 2020).

In a study by Murray *et al*. (2006), data was used to calculate excess mortality during the 1918–1920 pandemic using least squared methods, and predicted that the majority of the population in developing countries would get washed away if the 1918 pandemic history was repeated. As suggested by Hacck (2019), nations must work on enhancing their economy so that funding will be available during pressing pandemic circumstances. However, there has always been a huge gap between the availability of vaccines and the ever-rising demand for it in the underdeveloped and developing countries (Bennett and Carney 2010; Jester *et al*. 2018; Kant and Guleria 2018; Martini *et al*. 2019).

Studies by Barro, Ursua and Weng (2020) and Jakob (2020) suggests that the medical condition of most of the countries in times of COVID-19 is similar to that during the 1918 influenza pandemic. Barro, Ursua and Weng (2020) used regression analysis to assess the country's flu death rate on its economic outcomes, which had a negative correlation of (–) 0.25. Barro, Ursua and Weng (2020) used regression analysis to assess the impact of the 1918 influenza pandemic and the First World War on economic growth; however, it is suggested that most of the countries which experienced flu were not engaged in war. Findings suggest a possibility of an unprecedented number of deaths and a major global economic contraction, even though the probability of COVID-19 outbreak reaching anywhere close to the 1918 influenza pandemic is remote, given the mitigation measures being adopted and the advancement in medical infrastructure (Barro, Ursua and Weng 2020).

Schoenbaum (2001), Donaldson and Kenisston (2016), and Reyes *et al*. (2018) among others suggest that some of the problems prevalent in less-developed countries include poor admittance to medical care, embryonic public infrastructure, unhealthy socio-economic conditions, dense populations, uneducated classes, lack of proper awareness, presence of varied already existing infectious diseases, and malnutrition. Studies by Bell *et al*. (2009) and Jester, Uyeki, and Jernigan (2018) indicate that developing countries fall short in handling the impact of the pandemic as compared to developed countries due to lack of preparedness. Gottfredsson *et al*. (2008) suggest that fatalities attributable to a pandemic are significantly greater in developing countries than in developed countries. Many countries have already begun setting up and implementing pandemic preparedness plans; however, the level of preparedness varies from country to country (Chandra, Kuljanin and Wray 2012; Chandra and Kassens-Noor 2014). In developing countries, many health programmes are dependent on financial support from donors; however, a more general approach is required to improve pandemic preparedness in developing countries (Gaelogo 2009; Gerard, Imbert and Orkin 2020). By simply strengthening preparedness

within a single country, it is not possible to prepare for a pandemic (Mukherjea 2010; Nickol and Kindrachuk 2019; Pak *et al*. 2020).

Economic consequences of 1918 influenza pandemic and COVID-19 pandemic in India

The 1918 influenza pandemic as well as the COVID-19 pandemic has caused a lot of stir in the lives of the masses (Nickol and Kindrachuk 2019; Pak *et al*. 2020). Developing as well as developed economies have been affected as most of the economic activities have come to an impasse (Brainerd and Siegler 2003; Buheji *et al*. 2020; Donaldson and Keniston 2016). The economy of India, as mentioned in the introduction section, has more than half of its population engaged in the agricultural and unorganised sector, and that population does not have a stable source of income (Satpathy, Patnaik and Tripathy 2018). Thus in times of a pandemic, when all the sectors and industries including aviation, tourism, and micro-, small-, and medium-sized enterprises (MSMEs), etc. have come to a standstill, the economic downturn greatly affects the people belonging to the lower strata of the society (Dev and Sengupta 2020; Kumar *et al*. 2020; Pak *et al*. 2020).

As suggested by Donaldson and Keniston (2016) and Hacck (2019), the 1918 influenza pandemic advocated to have forced the poor people of India to extreme poverty, thus forcing them to earn their bread and butter from farming activities, thereby raising income disparity. The impact of the pandemic was prominent in many areas, leading to shortage in food supply on the one hand and rise in prices of food items and other supplies on the other hand (Schoenbaum 2011). During the initial stage of COVID-19, India and global economies witnessed lockdowns, with few or no economic activities, leading to mass unemployment as a lot of workers work in the informal sector on daily wages (Buheji *et al*. 2020; Pak *et al*. 2020). The nation witnessed mass movement of labour force from urban to rural India (Chaudhary, Sodani and Das 2020; Dev and Sengupta 2020). The movement is expected to have increased activities in the rural areas such as agriculture and allied activities (Timilsina *et al*. 2020).

During both the pandemics, the economies registered a fall in the per capita GDP. Maddison

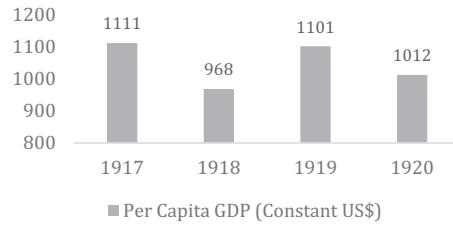


FIGURE 3. Trend of per capita GDP during 1918 influenza pandemic in India

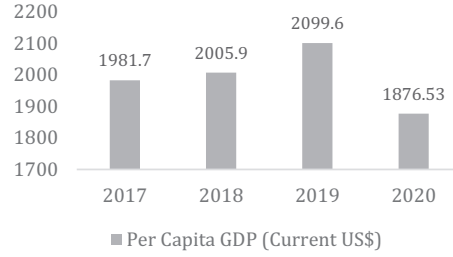


FIGURE 4. Trend of per capita GDP during covid-19 pandemic in India

Project Database (2020), as depicted in Figure 3, suggests that during the influenza pandemic, per capita GDP fell from US$1111 in 1917 to US$968 in 1918. However, in the later years, the per capita GDP began to rise. Figure 4 depicts that in 2020, when the COVID-19 pandemic was at its peak, IMF estimated the nominal per capita GDP of India to be US$1876.53, which was US$2099.6 in 2019. Numerous agencies such as the World Trade Organization, Standard and Poor, and Goldman Sachs have estimated that the GDP of the Indian economy to contract by 10–20 per cent, and the global growth by 8 per cent.

According to Chaudhary, Sodani and Das (2020) and Singh and Misra (2020) a reduction in customer spending, low level of economic activities during the nationwide lockdown, decline in exports, and reduced allowances are some of the key reasons for this decline in GDP. As suggested by Gopalan and Misra (2020), the disruption in the jobs of people working abroad is expected to have an adverse impact on remittances from non-resident Indians, thereby making them take up jobs providing lower incomes, spending restrictions, and living

and working in poor conditions (Gopalan and Misra 2020). Gopalan and Misra (2020) predicted that the remittances are going to fall by more than 20 per cent in the year 2020 because of the disruptions caused by COVID-19.

According to Donaldson and Keniston (2014; 2016), during the 1918 influenza pandemic, the Indian subcontinent was undergoing low population growth clubbed with stable per capita income, popularly known as the Malthusian equilibrium. The authors also suggested that the high death tolls meant that survivors of the pandemic were left with additional land to practice agriculture. Thus, there was no loss in the agricultural yield; however, the high mortality rate during the pandemic created a lot of unrest among the public, which gave rise to an increase in the birth rate (Donaldson and Keniston 2014; Donaldson and Keniston 2016).

Sen (1967) critically analysed Schultz's statistical test, where the latter had statistically analysed data from Indian agriculture before and after the 1918 influenza pandemic and concluded that surplus labour theory is a false doctrine in India. Sen (1967) argues that the mortality data considered by Schultz for the statistical analysis is more than the actual data, and has ignored the natural increase in population during these four years. According to Sen (1967), this is the reason for the fall in the labour force; however, this was not the case. To counter the critique by Sen (1967), Schultz (1967) replied that Sen's estimates of the agricultural labour coefficient were in the wrong direction. Schultz also clarified the alternative hypotheses, and commented that the tests conducted by Sen are not the appropriate tests for zero marginal product of labour; wherein an appropriate test would indicate a decisive rejection of the null hypothesis, and therefore a rejection, in this case, of the doctrine of surplus labour.

Chaudhary, Sodani and Das (2020), Nicola *et al*. (2020), and Nilima *et al*. (2020) suggest loss of jobs as one of the biggest repercussions of the COVID-19 lockdown as millions of migrant workers are expected to have lost their livelihood with almost no hope of a new job in the immediate future. In their research papers, Choudhary (2020) and Verma and Mishra (2020) mentioned that people working in the organised sector, such as the multinational corporations, also lost their jobs during the nationwide lockdown. Similar impact of the COVID-19 lockdown was also witnessed in countries other than India (Gerard, Imbert and Orkin 2020).

With reference to India, while the major research focus was on assessing the impact of epidemiological backgrounds and demographic effects of the 1918 influenza pandemic, research on the economic implications are scarce. Killingray (2003) and Kant and Guleria (2018) reported that unlike many other developed and developing nations, not many economic activities were restricted in India; however, there is evidence of a shutdown of colleges and schools and restriction on public gatherings for limited times to combat the situation. As suggested by Klein (1988), Mills (1986), and Weber and Dalton (2020), neither the British Government nor the Indian nationalists focused much on these issues, thus the economic activities did not stop at a mass level. However, during the outbreak of the COVID-19 pandemic, the governments of developing nations such as India took measures and enforced nationwide lockdowns (Dev and Sengupta 2020; Gopalan and Misra 2020). Though the initial containment measures and the lockdowns were effective to curb the spread of the virus; however, it negatively affected the economy and its people, thereby increasing the bridge between the rich and the poor (Dev and Sengupta 2020; Gopalan and Misra 2020; Kumar *et al*. 2020; Nicola *et al*. 2020; Singh and Misra 2020).

Social consequences of 1918 influenza pandemic and COVID-19 pandemic in India

There is evidence for developing countries to experience abrupt and swift outbreaks of epidemics or pandemics, which are usually triggered by malnutrition, dearth of sanitation, proper public health schemes, and inaccessibility of ready-made serums (Ergunay 2014). Effects of a pandemic are far-fetched, as it is a social phenomenon affecting famine and governance. The predominant circumstances in 1918 were mainly due to the First World War, economic conditions, crowding, and shortage of food supply (Schoenbaum 2001). Under such circumstances, it was natural to witness socio-economic upheaval, which led to imbalance in managing things well across all arenas (Mukherjea 2010; Scanlon and McMahon 2011). On the contrary, the socio-economic consequences of COVID-19 pandemic were mainly due to the

nationwide lockdown, in order to control the spread of the deadly virus.

As suggested by Kant and Guleria (2018), the diffusion patterns of pandemics are better understood when social interactions among people from different places, societal health-related responses, environments, physiognomies of the pathogens, and national and international travel designs are taken into consideration. In a country like India, where people thrive on their family and friends socially and emotionally, nationwide lockdowns are triggering mental health concerns (Choudhari 2020; Nilima *et al*. 2020). The cases of depression, anxiety, and stress are at an all-time high, leading to various concerns (Choudhari 2020; Dsouza *et al*. 2020; Verma and Mishra 2020). Studies by Choudhari (2020) and Kochhar *et al*. (2020) also show an increased mental stress among people with regards to their jobs. There is also an increase in suicidal thoughts among people, especially the ones who lost their jobs and means of livelihood because of COVID-19 (Dsouza *et al*. 2020).

Singh and Adhikari (2020) reported that in the heterogeneous Indian population with people belonging to different classes of the society, the COVID-19 scenario is impacting and changing how these people belong to their different age groups and social classes. The lockdown and stay-at-home restrictions have given time for people to re-bond with their families who are privileged to work from home; however, those who have lost their jobs and became homeless are fighting every single day in order to survive (Singh and Adhikari 2020). Studies suggest that mental stress is the highest among the section of people who have lost jobs due to the pandemic (Paital, Das and Parida 2020; Verma and Mishra 2020).

Another important aspect of the pandemic is the social health of the migrant workers, who moved from cities to villages after the nationwide lockdown because of loss of jobs (Chaudhary, Sodani and Das 2020; Choudhari 2020; Verma and Mishra 2020). The conditions of people living in rural areas with poor access to water and proper sanitation is at its worst; women seem to be badly affected with improper medical facilities, unhygienic surroundings, and lack of toilets, which calls for another health emergency in rural India (Choudhari 2020; Ghoshal 2020). Responding to this new challenge, various communities and groups, more so in rural areas, have come up with different coping mechanisms and solutions.

As suggested by Ghoshal (2020), the nationwide lockdown has "locked-down" all members of the household, with an ever-increased burden on women for managing household work, care work, as well as office work. Studies also suggest an increase in domestic violence, including sexual, emotional, verbal, economic, and physical abuse, is due to the strict lockdown measures implemented by the Governments in order to contain the spread of novel corona virus (Ghoshal 2020; and Nilima *et al*. 2020).

One major difference between COVID-19 and the 1918 influenza pandemic is the option to work from remote locations (Nikola *et al*. 2020). The advent of digital technology has paved ways to work from home. It has helped the employers in reduction of recurring costs such as rent and maintenance of office space; it has also helped the employees by reducing travel time and providing them with flexible working hours; and more services than ever have become available online (Ghosh, Nundy and Mallick 2020; Nikola *et al*. 2020). Employers are now also able to retain highly talented personnel by providing them the flexibility which was earlier not possible in the traditional work arrangements and during the era of the 1918 influenza pandemic. Though most of the services were available online, people belonging to some sections of the society got negatively impacted with the online culture. Many people lost their jobs and sources of livelihood, as their services were not considered safe during COVID-19 (Ceylan, Ozkan and Mulazimogullari 2020).

There is a significant gap in literature that assesses the societal impact of the 1918 influenza pandemic in India. However, in the wake of the COVID-19 pandemic, there is a need to draw the attention of healthcare professionals towards creating mental health awareness among people, and for policy makers to pay attention towards the needs of its masses.

Pandemic mitigation measures adopted by India

Pandemic control is not one nation's responsibility; the entire world has to work hand in hand with the World Health Organization (WHO) to overcome the devastating effects that have evolved

during occasions such as these two pandemics. Thus, co-ordinated and determined global policies are the key elements to free nations from the shackles of this deadly virus (Stiver 2004). To prepare developing nations face such deadly situations, the Global Pandemic Influenza Action Plan was initiated by the World Health Organization (WHO) in November 2006, where manufacturers from developing nations, including Indonesia, Mexico, Brazil, Thailand, Vietnam, and India, were given grants to develop vaccinations. In 2009, Romania, Korea, Iran, Serbia, and Egypt joined the line of pandemic vaccine development as grant holders (World Health Organization Report 2006).

In the wake of the COVID-19 pandemic, the main priority facing all nations is to ensure the safety of its citizens; thus, understanding the nature of the virus and coming up with a vaccine at the earliest point is of pivotal importance (Jakob 2020; Paital, Das and Parida 2020; Sarkar, Khajanchi and Nieto 2020). The World Health Organization has brought together businesses, scientists, and global health organisations of 172 nations under one umbrella for the development of the COVID-19 vaccine, with the objective of benefitting all nations and providing medical assistance to nations in need.

Studies suggest that the influenza pandemic of 1918 was a seasonal flu, and containment measures had little impact on its spread; but at the same time, social distancing was the key to flattening the curve as vaccines were not available (Spreeuwenberg, Kroneman and Paget 2018). However, COVID-19 is not a seasonal flu, and its spread increases as soon as the containment measures are lifted (Ghosh *et al*. 2020; Singh and Abhikari 2020). In 1918–1919, measures to mitigate the pandemic were limited (McMohan 2011), whereas during the COVID-19 pandemic, when the vaccines were being developed, measures such as closure of schools, stores and restaurants, the imposition of travel restrictions, the imposition of social-distancing norms, and the prohibition of public gatherings were necessary to prevent catching the deadly virus (Ceylan, Ozkan and Mulazimogullari 2020; Nicola *et al*. 2020).

According to Scanlon and McMahon (2011), Nicola *et al*. (2020), and Singh and Adhikari (2020), among others, a number of possible interventions, including pharmaceutical interventions such as vaccines and antiviral agents and non-pharmaceutical interventions such as quarantine, isolation, social distancing, and personal hygiene, can be implemented to control or mitigate the effects of influenza and COVID-19 pandemics, both of which are respiratory diseases. Studies by Bennett and Carney (2010), Jester, Uyeki, and Jernigan (2018), and Sarkar, Khajanchi, and Nieto (2020), among others, suggest recent efforts to increase the worldwide availability of vaccines and antivirals help boost the global availability of these drug interventions; however, increased availability of a vaccine alone will not solve all the issues in many countries – several other concerns, such as lack of medical professionals, finances, medical equipment and infrastructure, vaccines and other medical supplies need to be addressed in order to implement pharmaceutical interventions.

Apart from medical assistance being provided by the WHO and the local bodies, the global economies are also in need of improving their economic conditions. Agencies such as the International Monetary Fund, United Nations, World Trade Organization, and local governing bodies are providing stimulus in order to boost the economies. In India, the Central Government as well as the State Government are taking numerous measures for public health, socio-economic, and serious livelihood challenges (Dubey and Sahu 2020; Sahoo and Ashwini 2020). One of the hallmarks of the Government of India initiative is consistent, evidence-based, and standard public health communication through various mediums for the entire citizenry of the country.

The Ministry of Finance of the Government of India has been trying to foster the economy by introducing stimulus packages for people, sectors, and businesses that have been badly affected because of the COVID-19 pandemic (Dubey and Sahu 2020). Apart from this stimulus, the Government of India is uplifting key sectors, such as agriculture and allied activities, and the MSMEs (Priyadarshini and Abhilash 2020; Sahoo and Ashwini 2020). As suggested by Pak *et al*. (2020), another key challenge in front of the government is to provide employment opportunities. Loss of jobs and livelihood due to the COVID-19 pandemic and nationwide lockdown led to mass migration of migrant workers from urban area to rural areas (Chaudhary, Sodani and Das 2020; Choudhari 2020; Verma and Mishra 2020). The Ministry of Housing and Urban Affairs of the Government of India is also planning to extend this scheme in urban areas to put a brake in the surge in unemployment

because of the lockdown induced by COVID-19 (Press Trust of India 2020). In order to promote and export the products that are made locally, the Government of India has also launched the Aatmanirbhar Bharat Abhiyaan (Self-Reliant India Initiative), and have requested the public to go for locally made products, which is also expected to help in employment generation. Although the aim of the Aatmanirbhar Bharat Abhiyaan is to make India self-reliant, researchers argue this is India's step against the process of globalisation, which was initiated in the year 1991 (Dubey and Sahu 2020).

The immunity of the public to tackle a new virus is not ingrained, and if the virus is as deadly as the Coronavirus, it calls for collective action. COVID-19 has negatively impacted the health conditions, economies, and societies of nations across the globes, who have been trying to deal with the virus and have been adopting various measures. It is expected that these measures will help the economy of India get out of the pandemic. Similar initiatives are also expected to help other developing nations during the COVID-19 pandemic. The next section contains the conclusion of the literature review section along with the recommendations by the researchers.

Conclusion and recommendations

The 1918 influenza pandemic was one of the most widespread and deadliest flus that have been witnessed by the global economies (Tsoucalas, Kousoulis and Sgantzos 2016; Wijdicks 2020). Although there is no clear evidence of the origin of the 1918 influenza pandemic, history suggests that the initial cases were reported by the US Army immediately after the First World War. With the movement of people, the 1918 influenza pandemic also started to spread in different parts of the world in four different waves, where each wave was equally deadly (Brainerd and Siegler 2003; Chandra 2013; Martini *et al*. 2019; Nickol and Kindrachuk 2019). The pandemic infected millions and took lives across the globe, including in India (Johnson and Muller 2002; Bala 2011; Chandra, Kuljanin and Wray 2012; Kant and Guleria 2018).

At present, India as well as the world economy is suffering from the COVID-19 pandemic, the first case of which was reported in the city of Wuhan in the People's Republic of China (Ali and Alharbi 2020; Chaudhary, Sodani and Das 2020). The 1918 influenza pandemic as well as the COVID-19 pandemic have similarities in the nature of the diseases and their spread. In the past, during the outbreak of the 1918 influenza pandemic, neither technology nor healthcare were as advanced, thus the researchers and health scientists could not come up with a vaccine to prevent the spread of the pandemic, although the pandemic was over by 1920 (Rosner 2010; Jester, Uyeki and Jernigan 2018). With advanced technologies and robust healthcare systems, scientists have devised vaccines for protection against COVID-19 (Ali and Alharbi 2020; Jakob 2020).

Countries have reported to have faced severe economic catastrophe because of the 1918 influenza pandemic. An epidemic does not impact just the health of the citizens, but the economy as a whole. During the 1918 influenza pandemic, countries started restricting trade with other nations, cancelling public events, and took various measures to prevent the health of the citizens. Another aspect of the pandemic was to combat the pandemic in order to revive the economy. Thus, the current study attempts to understand the pandemics and suggest measures that can help India boost its societal growth and economic development.

Findings from literature suggest that developing countries have faced more severe implications of such pandemics compared to developed countries (Murray *et al*. 2006; Singh and Misra 2020). The effects of pandemic are more severe in low-income countries as compared to high-income countries. Developing countries generally lack combating skills, so imitating the measures taken in developed nations stands as an important step along with making the nation self-reliant by focusing on enhancing its inherent capacity (Bell *et al*. 2009; Murray *et al*. 2006). Developing countries must not be underestimated, especially when these nations overcome natural calamities; thus, similar resources that are used during disasters may also be beneficial during a pandemic.

The research findings also suggest the socio-economic impact of the 1918 pandemic on the Indian economy (Martini *et al*. 2019; Mukherjea 2010). It was not among the main interests of most of the national leaders, including the British Government, to put the economy in lockdown and suffer losses. Thus, India did not suffer much economic loss as compared to many other developing as well

as developed countries (Garrett 2007; Garrett 2008; Schoenbaum 2001; Verikios *et al*. 2011; and Weber and Dalton 2020). The poor health infrastructure during those times led to India's mortality rate in the 1918 pandemic of approximately 5 to 6 per cent of its total population, in which women, the elderly, and children were high at risk from the deadly virus (Martini *et al*. 2019).

A century after the influenza pandemic, the perspective of looking at lives, the healthcare system, and the economy has changed in the context of the COVID-19 pandemic. Work and life are now based on virtual connections, as social distancing and staying home has become the "new normal". It is the need of the hour to embrace this "new normal" until the vaccines being tested are proven and supplied. Until then, it is imperative to lead a digitised life, work from home, and avoid socialising (Ojo 2020; and Pambuccian 2020). Although physical distancing is the key to contain the spread of COVID-19, there is a growing need to promote awareness of the effect of these measures on mental health.

In order to revive the socio-economic conditions of India, the researchers have come up with a few recommendations. Firstly, the Government should ensure that the basic amenities are made available to people from all sections of the society at affordable prices, thereby ensuring supply chain effectiveness. If the supply chain gets disrupted because of COVID-19, leading to supply-demand disequilibrium, it will negatively affect the economic activities at large. Secondly, medical facilities should be provided to all those who need it. Many other patients suffering from diseases such as cancer and TB are being neglected because of the ongoing pandemic. Ensuring medical aid and understanding the nature of the virus should be the priority of the governing bodies. Thirdly, the government should focus on employment generation, as unemployment and migration from cities to villages has increased because of the nationwide lockdown. The government should focus and prioritise key areas. It is essential for the government to focus on developing means of livelihood for its public in rural areas. The government has already introduced policies for the development of both these sectors, with due focus on job creation. Fourth, there is a need for more stimulus to be pumped into the economy. There is also a need for the government to invest in sustainable infrastructure for a safe and sound future. Finally, the government should focus on putting laws and ordinances into place for the workers in the unorganised sector, as they are neither covered by an employer's social security scheme nor insurance scheme. They are the most neglected and highly exploited workforce with very little legislation to support them. The COVID-19 pandemic has increased the necessity of attention towards the marginalised population holistically. Thus, the abovementioned measures will be fruitful from health, socio-economic, growth, and development perspectives.

Note

1. The database was accessed on 25th Jan, 2021.

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