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## Review

## COVID-19 pandemic and challenges for socio-economic issues, healthcare and National Health Programs in India

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## A B S T R A C T

**Background and aims:** The nationwide lockdown was imposed in India following novel coronavirus pandemic. In this paper, we discuss socio-economic, health and National healthcare challenges following lockdown, with focus on population belonging to low socio-economic stratum (SES).

**Methods:** A literature search was conducted using PubMed and Google Scholar. In addition, existing guidelines including those by Ministry of Health and Family Welfare, Government of India, and articles from several non-academic sources (e.g. news websites etc.) were accessed.

**Results:** While the nationwide lockdown has resulted in financial losses and has affected all segments of society, the domino effect on health, healthcare and nutrition could possibly pose major setbacks to previously gained successes of National health programs.

**Conclusion:** Apart from firm economic measures, all National Health Programs should be re-strengthened to avert possible surge of communicable (apart from COVID19) and non-communicable diseases. These efforts should be focussed on population belonging to low SES.

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## 1. Introduction

Coronavirus disease 2019 (COVID19) pandemic, caused by SARS-COV2, is of unprecedented global public health concern [1]. To combat the disease, the Government of India imposed a lockdown in most districts of the 22 States and Union Territories where confirmed cases were reported from March 24, 2020 onwards. Currently, the lockdown has been extended till May 31, 2020. The Government of India has claimed success in the fight against the coronavirus pandemic, stating that the number of cases would have been more if the nationwide lockdown had not been imposed. However, this view is now being contested, as recently numbers of COVID19 cases have surged.

In this brief review, we aim to discuss the impact of the lockdown in response to the COVID 19 pandemic on social, economic, health, and National Health Programs in India.

## 2. Search methodology

The literature search has been carried out by using the key terms 'COVID19' combined with, 'lockdown', 'social', 'economic', 'healthcare', 'diseases', 'National Health Programs', 'low socio-economic stratum', 'India' from PubMed (National Library of Medicine, Bethesda, MD) and Google Scholar from January 2020 to May 2020. A manual search of the references was carried out. Articles from several non-academic sources (e.g. news websites etc.) were also accessed.

## 3. The economic impact

Real Gross Domestic Product (GDP) growth had been estimated by the Reserve Bank of India (RBI) at 6.2% in 2019–20 [2]. The International Monetary Fund however, lowered India's growth forecast by 1.3% points to 4.8% for 2019–20 and stated that India's growth had slowed sharply [3]. It is self-evident, therefore, that an economy already affected by slow growth in the previous fiscal year would be severely affected by the lockdown as a result of the pandemic. The Small and Medium Enterprises market ratings project that the nationwide lockdown is expected to incur losses of

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over \$4.5 billion (₹ 35,000 crores) every day during the lockdown [4]. The healthcare sector, the fourth-largest employer in the country, and specifically the private sector which provides nearly 80% of out-patient care and about 60% of in-patient care [5] is currently facing 90% losses due to decreases in out-patient attendance, elective surgeries and international patients [6].

During the current pandemic, the economic downturn has greatly affected people from the lower socio-economic stratum (SES). The distressing media visuals of migrant labourers going to their native places from the cities on foot during the lockdown has been critically debated. Remittance of money to the home country, which many migrant Indian workers popularly do, is another way of poverty reduction, economic development and increase in GDP. About \$139 billion (₹ 1042500 crores) was remitted to low and middle income (LMICs) countries of South Asia from countries of work (e.g. Gulf countries) in the year 2019 [7]. The disruption caused by COVID19 has had a significant impact on these remittance flows. Importantly, remittances are projected to fall by about 23% in India in 2020 (Fig. 1), to \$64 billion (₹ 4,80,000 crores) in striking contrast to a growth of 5.5% and receipts of \$83 billion (₹ 6,20,000 crores) seen in 2019 [8]. The World Economic Forum states that in the current pandemic situation, migrants stuck abroad trying to cope with the exigencies will compromise to the adverse circumstances, by taking up low wage jobs, live in poor working conditions, restrict spending and thus, risk exposure to infections like the coronavirus [7].

The scenario among the internal migrant workers (intra- and inter-state) in India is equally grim. These workers constituting the informal sector, total to a staggering 139 million and are about 93% of the workforce [9]. About 50% of migrant workers stated that they had rations for less than a day when interviewed [13]. Further, the study by Stranded Workers Action Network showed that 89% of the stranded workers had not been paid wages by their employers during the first 21 days of lockdown and that 74% had less than half their daily wages to live on [10].

The economic impact of this pandemic is likely to be more severe for India in the following manner; (a) increase in poverty i.e. pushing more people below poverty line [11], (b) worsening of socio-economic inequalities [12,13], thus affecting health and nutrition indices, and (c) compromise in health-related precautions (use of masks, social distancing, seeking medical advice in case of cough and fever etc.). All these would have major long-term associations with health indicators.

#### 4. Socio-cultural challenges

The social fabric of India thrives on interdependence, both emotional and economic, within families, relatives and friends [14]. Close physical interactions like living in crowded housing and other

places, pushing and jostling are extremely common and are deterrent to 'social distancing' as dictated during this pandemic. Despite the lockdown, crowding has been observed in religious places, during travel (e.g. 'herds' of migrants on buses) [15], or even while purchasing liquor at the shops. While 'vertical distancing' is the cause of inequalities in India, the 'horizontal distancing' put in place in the wake of COVID19 has further exacerbated these inequalities [16].

The more troubling aspect is the lack of proper provision of safety nets (e.g. food safety) for those hit the hardest by lockdown [12]. Due to the enormous scale of the problem the government schemes remain vastly inadequate. As a result of the lockdown, there is increased possibility of malnutrition among the low SES. The Food Corporation of India recently allotted 12.96 lakh metric tonnes of food grains under the *Pradhan Mantri Garib Kalyan Anna Yojna* (PMGKAY) as an initiative of Government of India in its fight against the COVID19 [17]. Efficacy of this scheme and adequacy of food distribution remains to be seen.

#### 5. Impact on health, prevalent diseases and National Programs

Morbidity and mortality due to COVID19 in India are largely attributable to co-morbid conditions i.e. non-communicable diseases (NCDs) like diabetes, hypertension or cardiovascular disease [18–20]. Further, early-onset of NCDs, as seen commonly in India, is likely to put even younger individuals at risk for COVID19.

COVID19 has the potential to cause disruptions to health and health services in India in different ways. For instance, Ghoshal et al. [21] used predictive models and projected that the duration of lockdown is directly proportional to the worsening of glycaemic control in patients with diabetes as well as would increase diabetes-related complications. Such an increased load of diabetes-related complications will put additional load on an already overburdened public healthcare system. Further, such uncontrolled glycemia and increased cardiovascular complications have the potential to increase the severity of COVID19 in patients.

The lockdown could also be a cause of weight gain during the COVID19 pandemic, because of poor physical activity, increased snacking and consumption of calorie-dense foods. In an observational study conducted by our group, carbohydrate consumption and frequency of snacking increased by 21% and 23%, respectively, exercise duration was reduced in 42% patients and weight gain occurred in 19% of patients with type 2 diabetes [22]. Weight gain and obesity could increase the severity of COVID-19 (30) and may increase the risk of development of diabetes and cardiovascular disease in the future.

Other diseases, the control of some of which had shown an encouraging trend until now, could also surge. For example, Human Immunodeficiency Virus (HIV) infection, TB and malaria-related deaths over 5 years may increase by up to 10%, 20% and 36%, respectively, compared to a scenario without COVID-19 pandemic [23]. The reasons are many; interruption of antiretroviral therapy (ART), reductions in timely diagnosis and treatment of TB and reduced prevention activities including interruption of planned net campaigns for malaria.

As briefly discussed earlier, the economic slowdown could aggravate malnutrition. The loss of daily wage earnings or joblessness can make it difficult to buy even basic food items in people belonging to low SES. The inadvertent fallout of this would be the deleterious effect on the most vulnerable population namely the children [24] and the pregnant women; thus negating previous gains of maternal and child health and nutrition-related National Programs. Robertson et al. [25] modelled three scenarios in which the coverage of essential maternal (e.g. antenatal care, childbirth

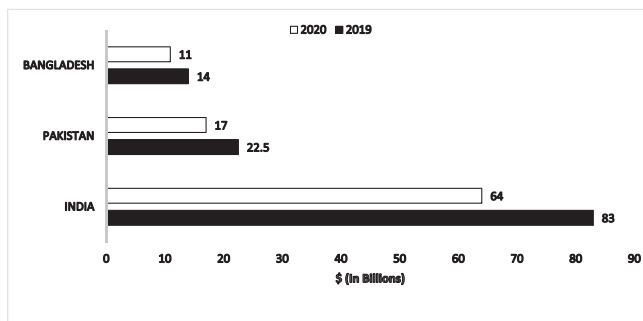


Fig. 1. Fall in remittance flows to 3 countries of South-East Asia (in USD\$) from 2019 to 2020 (Adapted from Reference 11).

care) and child (early childhood vaccination) health interventions is projected to reduce by 9–8–51.9% and the prevalence of wasting would increase by 10–50% in low- and middle-income countries. The authors emphasised that even in the least severe scenario (coverage reductions of 9–8–18.5% and wasting increase by 10%) over a period of 6 months would result in the substantial additional child and maternal deaths, 2,53,500 and 12,200, respectively. Another important upcoming health issue is mental health. Increase in chronic stress, anxiety, depression, alcohol dependence, self-harm and heightened physical abuse (domestic violence) has been reported as a consequence of the lockdown [26,27].

Overall, a setback in the progress made by the National Programs and worsening of health indices are real possibilities in India.

## 6. Conclusion

The pandemic of COVID19 has necessitated the need for attention to the underserved and marginalised populations holistically, to prevent long-lasting adverse health outcomes. Economic stressors on the whole population will need mitigation and quick changes in policy would help. Finally, National Health Programs for communicable and NCDs must be re-vitalised and strengthened.

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