

# Challenges and Silver Linings of COVID-19 in Ethiopia –Short Review

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**Abstract:** Difficult situations bring not only challenges but also fruitful opportunities. The pandemic of COVID-19 by itself and the related governmental or individual level measures have their own challenges and opportunities to the community, which even might be directly or indirectly related to the control and prevention of the pandemic. The silver linings of the pandemic of COVID-19 should be uncovered to encourage the community not only to focus on the black side of the disease but also to enjoy the opportunities. This can contribute to facilitate the control of the disease and avoid the related panics. In this review, we have discussed the challenges of COVID-19 in Ethiopia in terms of health, economy, and social life, and the silver linings in terms of research opportunities, technological transformation, reading culture, and family discussion. The literatures used in this review were published and unpublished articles, reports, and working papers from Google Scholar, PubMed, MedRxiv, BioRxiv, and official websites of national and international organizations.

**Keywords:** challenges, opportunities, silver linings, Ethiopia, coronavirus disease, COVID-19

## Introduction

Coronavirus disease 2019 (COVID-19) is an infectious disease spreading quickly and reaches about 216 countries/territories in the world. Globally more than twenty million peoples were affected by this infection and 744,385 were died as of August 13, 2020.<sup>1</sup> In Ethiopia the first case was detected on March 13, 2020.<sup>2</sup> The total number of cases and deaths as of August 14, 2020 were 26, 204 and 479 respectively.<sup>3</sup>

Ethiopia is one of the developing Sub-Saharan African countries facing double burdens from infectious and non-infectious diseases.<sup>4</sup> On top of this, the current pandemic of COVID-19 brings additional frustration to the country.

To tackle the pandemic, the government of Ethiopia has been taking several measures prior to the first case detection and still modifying them accordingly. These include preparing health institutions that will fully serve the patients of COVID-19, organizing the teams that will facilitate the control and prevention of the disease in different levels, declaring the state of emergency, preparing isolation and quarantine centers, awareness creation in different methods and resource mobilization from different bodies to support vulnerable groups and others. Generally, unless mandatory it is not recommended for peoples to be out of home currently; hoping this will reduce the interpersonal virus transmission of COVID-19.<sup>5-7</sup>

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Although different measures have been taken, the number of cases is increasing and it is feared that the number might be increased exponentially in the coming few months.<sup>8</sup> This signals the stay of the aforementioned measures to be relatively long and the emergence of the other additional strong measures.

Difficult situations bring not only challenges but also fruitful opportunities. The pandemic of COVID-19 by itself and the related governmental or individual level measures have their own challenges and opportunities to the community, which even might be directly or indirectly related to the control and prevention of the disease of interest.

The silver linings of the pandemic of COVID-19 should be uncovered to enable the community not only to focus on the black side of the disease but also to enjoy the opportunities. This can contribute to facilitate the control of the disease and avoid the related panics. In this review, we have discussed the challenges of COVID-19 in Ethiopia in terms of health, economy, and social life; and the silver linings in terms of research opportunities, technological transformation, reading culture, and family discussion.

## Methods

We performed searches of published and unpublished articles, reports, and working papers from Google Scholar, PubMed, MedRxiv, BioRxiv, and official websites of national and international organizations. The terms we have used to search include “Challenges” AND “coronavirus disease/COVID-19”, “Effect” AND “coronavirus disease/COVID-19”, “Impact” AND “coronavirus disease/COVID-19”, “Opportunities” AND “coronavirus disease/COVID-19” and “Silver linings” AND “coronavirus disease/COVID-19”. In addition, the following search terms were used to retrieve the other remaining studies. These included “coronavirus disease”, “novel coronavirus” “COVID-19”, “SARS-CoV-2”, “2019-nCoV” and “coronavirus”. Articles that evaluated the positive and/or negative effect of COVID-19 on global population or systems were included in the review. Considering this as inclusion criteria, both authors evaluated the title and abstract of the articles independently to exclude ineligible papers before the final review of the eligible studies. Moreover, the World Health Organization (WHO) and Ethiopian public health institute websites were accessed to obtain the recent epidemiological profile of the COVID-19.

## Challenges Related to COVID-19 in Ethiopia Health-Related Challenges

It is obvious that COVID-19 brings an extra strain to the health system of the countries.<sup>9</sup> This becomes more complicated for countries like Ethiopia whose health system not provide basic and regular health services adequately for their citizens in normal situations. In these countries it is estimated that additional morbidity and mortality may occur among vulnerable groups like mothers and children.<sup>10</sup>

The health professional to population ratio is 0.96 per 1000 populations<sup>11</sup> which is much lower than the WHO recommended standards, (4.45 per 1000 populations) to meet the sustainable development goal health targets.<sup>12</sup> This indicates that the health need of the country is not being addressed adequately and the addition of unplanned COVID-19 related needs worsen the problem.

Another bad scenario is that the health professionals, who are considered to be the pillars of the health systems, are among the high-risk groups to COVID-19<sup>13</sup> and if the significant number of them are going to be infected by coronavirus the health system may collapse.

The quality and quantity of nonhuman resources is also limited in Ethiopia. The health facilities are very few in number and they are not well equipped. Currently it was reported that Ethiopia had only 557 mechanical ventilators and 570 intensive care unit (ICU) beds for a population of 110 million.<sup>14,15</sup>

COVID-19 affects not only the health system but also the health of the people. Even individuals who are not infected by coronavirus can have indirect effect of the pandemic. Peoples staying at home are prohibited from going to religious places and recreational areas. Being with the 24 hours COVID-19 related fake and real news, these limitations of movements might result in different mental problems like anxiety, depression, and suicide.<sup>16,17</sup> Physical inactivity can also predispose them to health risks like cardiovascular diseases, and even to an increased risk of developing severe COVID-19 if there is the exposure probability.<sup>18–20</sup> Moreover, patients with the other health problems might not be the priority clients during this crisis time and the patients themselves may not seek medical care by fearing the risk of acquiring COVID-19 from transportation and/or from health facilities.<sup>21–23</sup> These all may lead to an increased morbidity and mortality from easily preventable or manageable health conditions.

Quarantine, which is one of the control measures for COVID-19, is associated with different problems. Mental problems like stress, anxiety and depression which in turn leading to unhealthy diet are the common problems among quarantined peoples. Physical inactivity, which was reported as more common among women, is also one of the problems of quarantine. These aforementioned problems are likely to predispose the quarantined peoples to cardiovascular diseases.<sup>24</sup>

Inadequacy of nutrition is one of the known health problems in Ethiopia and this is going to be exacerbated by COVID-19. There is a bidirectional relationship between nutritional problems and COVID-19. The nutritional inadequacy can predispose to decreased immunity against coronavirus infection and increased susceptibility. In another scenario the COVID-19 decreases availability and accessibility of food through income loss, lack of transportation access, and other COVID-19 related measures.<sup>7,25,26</sup>

One of the effective measures to prevent COVID-19 transmission is regular hand washing.<sup>27</sup> But in Ethiopia 43% of the rural population has no access to an improved source of clean water which makes regular hand washing practice an ideal.<sup>25</sup>

## Economy-Related Challenges

COVID-19 impacts the economy of a globe as a whole, countries, and individuals in several ways. The closure of the border is disrupting the global chain supply, tourism investment is decreasing, cost spent for health is increasing and the irrational increment of goods' price in the local market is leading to inflation.<sup>28,29</sup>

In Ethiopia, peoples in lower economic classes like daily laborers are waiting for the aid from the donors to get their daily bread, since the temporary contractual agreement between them and their employer organizations is canceled either partially or completely due to the COVID-19; leading to an additional strain of unemployment to the country. Females are more vulnerable to this problem since they are the majority of the employees in the informal economy.<sup>17,30-32</sup>

Lack of transportation access with other COVID-19 related measures is leading to income and wealth losses in countries.<sup>33</sup> In Ethiopia the public and private transport service provider vehicles are forced to decrease the number of travelers by half from their regular loading capacity and travelers have to pay doubled cost for each trip. This also decreases the access of the people to routine economic activities.<sup>31</sup>

Peoples staying at home are consuming what they saved in normal conditions and they are not replacing it. This is also the main challenge for the future economy of the country. In addition, unhealthy people, due to the direct or indirect effect of COVID-19 will not be engaged in income-generating activities.<sup>34,35</sup>

## Social Life-Related Challenges

Strong social life is one of the main distinguishing features of an Ethiopian society.<sup>36</sup> But this is highly challenged by "social distancing", one of the measures to reduce the person to person transmission of coronavirus.<sup>27</sup>

Social institutions and events like *edir*, *ekub*, *mahiber*, mourning, wedding, worshiping and others are being practiced in groups in Ethiopia and the disruption of such practices may lead to the social crisis in the future.<sup>37,38</sup> Lack of participation in the aforementioned social activities can result in mental health problems like depression and anxiety.<sup>39</sup>

The contagious nature of the disease prevents people from visiting patients and this can also impact social life negatively. Peoples who lost their families especially when there is a significant number of deaths may be exposed to grief and the problem can be highly complicated when they could not participate in the burial processes due to the infection prevention-oriented burial protocol of COVID-19 related deaths.<sup>40,41</sup>

Another risk that may result in the crisis of the society is political instability aggravated by COVID-19. In this year (2020), there was the country wide election in Ethiopia and it was postponed to unspecified time due to COVID-19. This is becoming the cause of the disagreement among the different political parties in the country and putting another challenge in the prevention and control of COVID-19.<sup>14,42,43</sup>

Discrimination and stigma against the infected peoples are the hallmarks of the most contagious diseases. Patients with COVID-19 are not spared from this problem and similar situations can be occurred in Ethiopia.<sup>44</sup> As recommended by the WHO, people who have COVID-19 have not done anything wrong, and the population in any part of the world should support them. In addition, when referring to people with COVID-19, it should not be attached to any particular ethnicity or nationality.<sup>45</sup>

One of the feared social crisis that may be transformed from health crisis is that, students stayed at home may setback and become food unsecured particularly those who were benefited from school lunch programs from public schools as in Addis Ababa, capital of Ethiopia.<sup>46</sup>

## Silver Linings of COVID-19 in Ethiopia

COVID-19 is not only the problem to our globe but also it has its own silver linings.<sup>47</sup> Hereunder we have discussed some of the opportunities related to COVID-19 in the Ethiopian context.

### Research Opportunities

Currently in almost all of the scientific journals, COVID-19 related scientific investigations ranging from the trial of effective therapeutics and vaccines to short and long term impacts of COVID-19 on the different sectors are the priority issues. On the front page of the different journals' home page there is an invitation to submit papers on COVID-19 and this itself can encourage the scientists to do more researches.<sup>48</sup>

One of the duties of Ethiopian higher education institutions (universities) is conducting valuable and problem solving scientific research. In this crisis time the government of Ethiopia is encouraging the scientific community in these institutions to conduct different researches. The ministry of science and higher education identified different priority areas with respective possible sources of funds and forwarded them to universities.

For health sciences to be complete, digging the role of traditional medicine in preventing and treating different health problems is an essential practice. In Ethiopia, traditional medicine has been practiced for a long time with an unreserved contribution to public health.<sup>49,50</sup> The era of COVID-19 may be the golden opportunity for the Ethiopian traditional medicine experts and the medications themselves if due attention is given to investigate the antiviral effects of these medications.

### Technological Transformation

The contagiousness of the coronavirus restricts the physical contact and due to this, different digital technologies are being utilized currently. Most of the technologies on use currently were utilized rarely in the previous time. Researchers are using a telephone calling method to collect the data, governmental and non-governmental officials are discussing using video conferences.

Patients, particularly those who were on follow up for different health conditions are getting their services using phone calling in health facilities like Black Lion Specialized hospital, which is among the few tertiary hospitals in the country. This can be taken as a hopeful

progression to telemedicine although its utilization was poor in Ethiopia.<sup>51,52</sup> Telemedicine is important to avoid the risk of COVID-19 transmission which can occur in different stages during going to health institutions physically. In addition, it can help reduce the number of patients visiting health facilities which also might be increased by cases of COVID-19, and also it can reduce the risk of acquiring COVID-19 for health professionals.<sup>53</sup>

Currently, there is a nationwide school closure in Ethiopia and this brings an opportunity for the students to learn using different media like television, radio, social media, and others. These methods might be useful for families to follow their children closely. But the visible limitation is that very few numbers of students will have access to the above-mentioned media and this will widen the existing achievement gap between the students from the lower and higher socioeconomic statuses.<sup>46</sup>

### Change in Reading Culture

Peoples staying at home are currently being encouraged to read books. The majority of the literate segment of the population in the country are assumed to prefer to use social media than reading books, and the others did not get adequate time to read.<sup>54</sup> This is the golden time to fill the gap related to reading. Influential peoples in the country including the prime minister are encouraging peoples to read different educational, political, and social (spiritual) books. For instance, the book of the prime minister titled "Medemer" is now converted to audio and ready to be distributed freely to citizens since there is a shortage of hard copy publications.

### Family Discussion Time

Most of the families in the world have no adequate family discussion sessions due to the shortage of time.<sup>55,56</sup> COVID-19 makes the peoples stay at home and discuss with their family on different issues and this can increase the bond between family members.<sup>57,58</sup> In another way staying at home enables them to know the behavior of their children and make an appropriate intervention. Ethiopian families are also expected to be benefited from these.

### Conclusions

Although the pandemic of COVID-19 has negative impacts on the health system, economy, and social life in Ethiopia, it has important silver linings regarding research opportunities, technological transformation, reading culture and family discussion time. The noticeable effects of the pandemic on

the health of the peoples is significant and should be managed accordingly. Different measures being taken to control and prevent the pandemic have their own positive and negative influences on the health status of the people. Quarantined peoples are prone to mental and cardiovascular problems. However, other prevention methods like hand washing, wearing protective mask and good ventilation are expected to reduce the prevalence and incidence of the top commonest health problems like acute febrile illnesses, diarrheal diseases and respiratory diseases in low income countries including Ethiopia. Thus, as part of controlling and preventing COVID-19, the opportunities emerging with this global crisis should be recognized and enjoyed without neglecting the measures against COVID-19. This can reduce other health problems, which may occur due to COVID-19, and facilitate the control of the pandemic itself.

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## Disclosure

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