COVID-19 and African immigrants in North Africa; A hidden pandemic in a violent region.

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Short Report

Keywords: COVID-19, African immigrants, North Africa

DOI: https://doi.org/10.21203/rs.3.rs-73018/v1

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**Abstract**

Since being declared a pandemic in March 2020, COVID-19 has brought difficult situations for citizens of nations worldwide. The effects, however, may be more severe for vulnerable communities such as immigrants, who are already in desperate situations and under deteriorating conditions. There are still very limited data on how the pandemic is impacting immigrant communities. Immigrant camps are fostering an environment that poses a great threat to the health of their inhabitants, especially at the time of a pandemic. Overcrowding, poor sanitation, inadequate healthcare, and difficulty containing contagious diseases are well documented in African immigration detention centers [1]. Furthermore, they are unlikely to take priority in a moment in which governments are mobilizing all resources to care for their citizens. Their situation is even more complicated if they are hosted in courtiers plugged by war, as in North Africa [2,3].

**Main Text**

Northern African countries are known to be an important hub to African immigrants towards Europe, particularly Libya, which has the longest coast in the Mediterranean basin. The ongoing armed conflict left the country split between two rival administrations vying for power, and no evident national policy to combat the pandemic was applicable. Currently, the reported cases of COVID-19 have increased overwhelmingly to reach over 20,000 cases (ratio 3/1000). This adverse policy environment in such a rich country has made the Libyan communities, particularly African immigrants, more vulnerable to the uncontrolled spread of COVID-19 [4,5].

The status of COVID-19 among African immigrants is not well studied, and no published data highlight the impact of COVID-19 on immigrants residing in North African countries. This study aims to highlight the incidence of COVID-19 in African immigrants and outline the needed policy to combat the pandemic within this neglected community.

A total of 350 blood samples collected from different African immigrants residing in two immigrant camps in Libya were included in this study. Each sample was tested using the COVID-19 IgM/IgG Rapid Test for the diagnosis of COVID-19. The test was performed according to the manufacturer’s instructions as previously described [6]. The immigrants were mainly males who arrived from different African countries, aged between 20 and 50 years, as shown in Table 1. Of the tested individuals, 11 (3.1%) tested positive for COVID-19, ranging from 0.6%, among a younger age group (20-30) and reached up to 6.0% in a middle age group. No significant relation was found between the prevalence of COVID-19 and the country of origin of the immigrants. The epidemiological investigations in this study indicate the identification of Corona cases within the camps of African immigrants. This is crucial for effective disease containment; once they are identified, they should be isolated, and their close contacts should be traced, which is difficult to apply in immigrant camps.
The main limitation of this preliminary study is that there were still false results when applying the IgG-IgM combined antibody test kit, which it should be taken into consideration. However, rapid serology tests provide a means to quickly triage suspected cases of COVID-19, provided the test is highly specific for the disease, particularly where there is little or no access to molecular testing, as in the case of African immigrants [6]. Furthermore, we were not able to trace the source of infection or to follow up on the clinical situation of the infected immigrants. Hence, further studies should be done to fulfill these caps.

In conclusion, the disproportionate burden of the COVID-19 pandemic for African immigrants is distressing, and thus, immediate action by the international community and regional governments is urgently needed to implement proper public health measures to protect immigrants as residents and when they return their countries.

**Declarations**

**Study approval**

All participants signed an informed consent form witnessed by the local health office before the collection of data and blood samples. The questionnaire used to collect demographic and epidemiological data was anonymous and linked to the blood sample tube only by a code [3]. The study was approved by the Libyan Study group of COVID-19 (Approval No. LY NS; COVID-19-IM-2020/00230).

**Declaration of competing interest**

The authors have no conflicts of interest to disclose.

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## Table

**Table 1:** The prevalence of COVID-19 in African immigrants and its correlation with demographic factors

| Demographic characteristics | Total | Prevalence of COVID-19 | OR (95% CI) |
|-----------------------------|-------|------------------------|-------------|
|                             |       | No (%)                 |             |
| **Age group**               |       |                        |             |
| 20-30                       | 147   | 1 (0.7)                | 0.8 (0.6-1.3) |
| 31-40                       | 153   | 7 (4.6)                | 5.1 (2.1-9.4) |
| 41-50                       | 50    | 3 (6.0)                | 7.1 (4.8-10.2) |
| **Gender**                  |       |                        |             |
| Male                        | 350   | 11 (3.1)               | 3.7 (2.9-5.4) |
| Female                      | 00    | 00 (00)                | 00 (00-00)   |
| **Location of immigrant center** | |                       |             |
| Southwestern region*        | 200   | 7 (3.5)                | 3.9 (2.9-6.4) |
| Eastern region **           | 150   | 5 (3.3)                | 3.6 (2.8-6.1) |
| **Region of origin**        |       |                        |             |
| North Africa                | 153   | 6 (3.9)                | 3.4 (2.9-10.2) |
| Central Africa              | 107   | 3 (2.8)                | 3.0 (2.9-9.8) |
| West Africa                 | 90    | 2 (2.2)                | 2.9 (2.1-9.4) |
| Libyan-Algerian borders*    |       |                        |             |
| Libyan-Egyptian borders **  |       |                        |             |