

Epidemiology & Public Health 2020: Covid-19 and social isolation in underdeveloped countries

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Abstract

Introduction: Drosten and colleagues (2003) studied a new corona virus in patients with Severe Acute Respiratory Syndrome (SARS) and similar new pathogens were investigated by Ksiazek (2003). In 2012, Saki and researchers isolated a new species of beta-corona virus whose closest known relatives are the bat corona viruses HKU4 and HKU5. That species was obtained from the sputum of a 60-year-old male patient who had acute pneumonia and kidney failure in Saudi Arabia. Zumla, Hui and Perlman (2015) called the Middle East Respiratory Syndrome. In 2019, sequential analysis of swab samples in the throat and electron microscope observations indicated a new corona virus, called SARS-CoV-2 (formally known as 2019-nCoV). Biopsy samples were collected from the lung, liver and heart tissue of a 50-year-old man who died (with a travel history for Wuhan). The post-mortem histological examination showed bilateral diffuse alveolar lesion with cellular fibromyxoid exudates. The severe immunological damage of this patient probably occurred due to over activation of T cells, manifested by the increase in Th17 and high cytotoxicity of CD8 T cells (XU et al., 2020). The evolution of the case cited was progressively rapid: on the 13th day of the disease, oxygen saturation remained above 95%, by oxygen therapy with a high-flow nasal cannula (concentration of 60%, flow rate of 40 L / min). On the afternoon of the 14th day of the illness, his oxygen saturation decreased to 60% and he suffered cardiac arrest. It is known that the world deals with a worse threat than wars, as there is no chance of diplomacy with the illness process. In

underdeveloped countries, 100% of the population unfortunately does not fully comply with the call for isolation and social distance. This percentage of individuals should not be judged, since many need to leave home due to precarious economic, health, emotional and social conditions.

Objective: To address the issue of social isolation in underdeveloped countries like Brazil, considering the unique public health system that defends the principle of equity. This principle guides us about the fact that unequal individuals must be prioritized to place them on the same level of rights as individuals with better economic conditions, for example.

Method: A literature review was carried out with the keywords “COVID-19” and “social isolation”, in the available databases: Elsevier, Nature, Lancet, Google Scholar, MedRxiv, Oxford and Science. Corona viruses are found to have high genetic mutability, although SARS-CoV-2 is not a descendant of SARS-CoV and the introduction of each of these viruses in humans has probably been facilitated by unknown un-known factors (Gorbalenya, 2020). Initial propagation speed estimates are assessed by their basic reproduction number (R_0), which varies from 1.6 to 4.1 for SARS-CoV-2 (LIU et al., 2020). According to Infogripe (2009), the basic number of reproduction (R_0) varied between 1.3 and 1.8, for the H1N1 Influenza A epidemic. Lethality can be affected by factors such as knowledge about the disease, installed diagnostic capacity and hospital overcrowding. The most recent cases may still be hospitalized and it is not possible to know the

result (Freitas, Napimoga and Donalisio, 2020). Regarding the incidence, the Italy Group for Evidence Medicine (Italy Group for Evidence Medicine) reported that 8.3% of the total cases of Covid-19 registered in Italy occurred in health professionals, almost double that reported in China equivalent 3.8% (Wu and McGoogan, 2020). China has managed to greatly reduce transmission mainly through three effective measures: protecting health professionals with personal protective equipment; identify symptomatic individuals, perform tests, give results quickly, isolate them and; identify communicators and quarantine them (World Health Organization et al., 2020). Digital technology is widely available and could be gainfully employed in India too. Specific interventions for India and other resource limited countries include better use of widely available e-application services (e.g., e-chaupals). This would lead to better point-of-care services in rural and urban areas, better treatment compliance, proper data collection and disease surveillance and appropriate distant health education [10]. Other interventions include counselling, emotional disclosures, adequate physical activities as well as maintaining social interactions. We believe that social cohesion and not social distancing, while maintaining physical distancing is the way forward for the covid-19 pandemic. The debate on measures to combat COVID-19 in Brazil seems to oscillate between two extremes: on the one hand, there are those who advocate the cause of social isolation as an indispensable measure to prevent a rapid spread of the virus. This could overload the health system. On the other hand, there are those who postulate that it is necessary to return to normality soon to avoid further damage to the economy than those that have already occurred in these few weeks of isolation (FILPO, 2020).

Results: The countries still in development present the debate regarding the level of poverty that is

opposed to the emergency by social isolation. In order to avoid the collapse of the health system and the accelerated progression in the number of deaths, the planned measures must also aim to protect the poorest, either through income preservation policies that allow social isolation (Pires, Carvalho and Laura, 2020). In Brazil, adults under 50 are affected by Covid-19 with a ferocity higher than expected (Dalcomoet al., 2020). The explanations for this change in the age group affected are established, because young people are leaving home more than the elderly; because there are socioeconomic conditions that correspond to illness by young people due to tuberculosis (for example), malnutrition, other diseases of the respiratory tract or immune-deficiencies that worsen with corona virus infection; young people may be exposed to a greater amount of viral load and; since the share of exceptions of individuals without risk factors to be affected by the virus is increasing with the larger scale of exposed individuals.

Conclusion: Criteria must be developed for leaving home in epidemics, respecting social isolation and distance. Social isolation is necessary, especially considering that Covid-19 can break out in communities where people live in agglomerations and without basic sanitation (Dalcomoet al., 2020). According to Souza (2016), mortality from diseases of the respiratory system has increased alarmingly in all regions of Brazil. Although everyone has the right to services, people are not the same: presenting different needs. In other words, equity means treating “the unequal unequally, investing more where the need is greatest”. More than ever, public policies and assistance to the poorest population suffering from unemployment, lack of sanitary conditions and malnutrition are needed, which is even characterized as a worsening factor if the individual is affected by Covid-19. In

addition, there is a need for further testing in the population.

Keywords: COVID-19; SARS-CoV-2; social isolation.