

The Importance of practice social distancing to reduce the spread of COVID-19

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Abstract

This study presents comparisons of national difference in anthropometric characteristics among Egyptian and Saudi Arabia People. Anthropometric data from the two studied groups (145 subjects in each group) were compared. The means of the total body length, upper limb length, lower limb length, median chest depth and the chest circumference were presented. Also, the correlations between the different measured items were calculated. The results of statistical analyses showed that there is a significant morphological difference among the studied groups. The Egyptian body shape has longer limbs with relative short torso and rounded chest contour. The Saudi Arabia body shape has shorter limbs with relative longer torso and flattened chest contour. The economic development, social environment and type of work all affect the ethnic differences in the body shape and body contour.

Keywords: Anthropometric Variables, Egyptian people, Saudi Arabia People

المخلص:

تقدم هذه الدراسة مقارنات بين الاختلافات الوطنية في الخصائص البشرية بين المصريين والمملكة العربية السعودية. تمت مقارنة البيانات الأنثروبومترية من المجموعتين المدرستين (145 موضوعا في كل مجموعة). تم تقديم وسائل طول الجسم الكلي وطول الطرف العلوي وطول الطرف السفلي وعمق الصدر الوسطي ومحيط الصدر. كما تم حساب الارتباطات بين العناصر المختلفة المقاسة. أوضحت نتائج التحليلات الإحصائية وجود فروق شكلية كبيرة بين المجموعات المدروسة. يحتوي شكل الجسم المصري على أطراف أطول مع الجذع القصير النسبي وكفاف الصدر المستدير. يحتوي شكل المملكة العربية السعودية على أطراف أقصر مع الجذع الأطول النسبي ومحيط الصدر المسطح. تؤثر التنمية الاقتصادية والبيئة الاجتماعية ونوع العمل جميعها على الاختلافات العرقية في شكل الجسم وكفاف الجسم. الكلمات المفتاحية: المتغيرات الأنثروبومترية، الشعب المصري، الشعب السعودي

1-Introduction:

The early appearance of the coronavirus was in China. According to Aljazeera news “On 31st December 2019, China alerted WHO to several cases of unusual pneumonia in Wuhan, a port city of 11 million people in the central Hubei province. The virus was unknown.”¹ The World Health Organization formally named the disease COVID-19, and the Coronavirus Study Group named the underlying virus severe acute respiratory syndrome coronavirus 2, or SARS-CoV-2.²

Since 2 January 2020, the three levels of WHO (China country office, Regional Office for the Western Pacific and headquarters) have been working together to respond to this outbreak of COVID-19. On 30 January, WHO declared the outbreak a Public Health Emergency of International Concern (PHEIC). On 11 March, WHO Director General characterized COVID-19 as a pandemic.³ It rapidly spread, resulting in an epidemic throughout China, followed by an increasing number of cases in other countries throughout the world.⁴

The survival of humanity as a species depends on the ability to socialize. The man spent most of his human history in small groups where everyone depended on others to survive. Nevertheless, can people practice social distancing to limit the spread of Coronavirus?

The article shows how, in the beginning, there was little commitment to applying social distancing as the only way to limit the spread of the Corona Virus epidemic in the absence of an active drug. But in front of the rapid spread of the epidemic, where in the first time in the history of mankind, mosques, churches and temples are empty of believers, and for the first time in human history, the squares of the Sacred Mosque in Mecca and the Vatican and Jerusalem squares are empty, The question now is whether people are beginning to commit to social distancing, are the governments become seeing social distancing as a solution that must Apply it even by force. This is what we will try to shed light on after we show by numbers the seriousness of this epidemic, which has so far killed thousands of lives.

2-The Seriousness of COVID-19 as a Global Health Security Threat:

Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV).⁵ MERS-CoV and SARS-CoV appear to originate in animals, and the same is likely true of SARS-CoV-2. This makes them zoonoses, diseases that can jump between humans and other animals. MERS-CoV and SARS-CoV were originally bat viruses that spread to an intermediate animal (camel and civet cat, respectively), which then exposed humans to the viruses. Genetic analysis of SARS-CoV-2 sequences shows that their closest genetic relatives appear to be bat coronaviruses, with the role of intermediate species possibly played by the pangolin, an endangered species trafficked in China for its scales and meat. There are four coronaviruses that cause colds in humans — known as HCoV-229E, HCoV-NL63, HCoV-OC43 and HCoV-HKU1 — and these also seem to have zoonotic origins.⁶

2.1-COVID-19 Symptoms:

According to the WHO Signs and symptoms of COVID-19 may appear two to 14 days after exposure and can include: ⁷

- Fever
- Cough
- Shortness of breath or difficulty breathing

Other symptoms can include:

- Tiredness
- Aches
- Runny nose
- Sore throat.

In the UK, the National Health Service (NHS) has identified the specific symptoms to look for as experiencing either: a high

temperature - you feel hot to touch on your chest or back a new continuous cough - this means you've started coughing repeatedly⁸

The severity of COVID-19 symptoms can range from very mild to severe. Some people have no symptoms. People who are older or have existing chronic medical conditions, such as heart or lung disease or diabetes, may be at higher risk of serious illness. This is similar to what is seen with other respiratory illnesses, such as influenza.

2.2-COVID-19 Spreading:

At the end of December 2019, Chinese public health authorities reported several cases of acute respiratory syndrome in Wuhan. The initial outbreak in Wuhan spread rapidly, affecting other parts of China. Cases were soon detected in several other countries. Outbreaks and clusters of the disease have since been observed in Asia, Europe, Australia, Africa, and the Americas.⁹ This means that the virus has spread to five continents, as shown on the map below

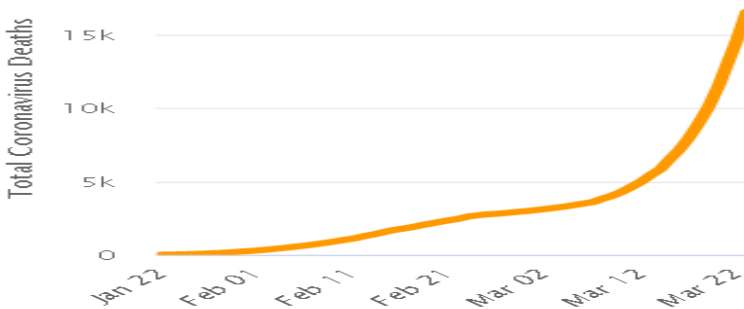
Fig 1. Map of the spread of COVID-19 across the globe



Source: Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU). 21 Mar. 2020. Web. 22 Mar. 2020. < <https://coronavirus.jhu.edu/map.html> >.

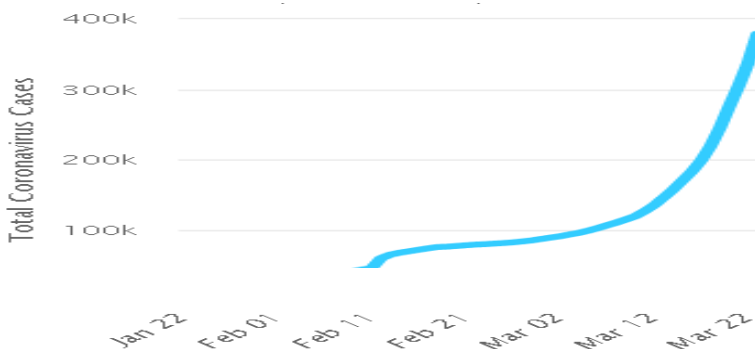
Many individuals who get coronavirus will experience nothing worse than seasonal flu symptoms, but the overall profile of the disease, including its mortality rate, looks more serious. At the start of an outbreak the apparent mortality rate can be an overestimate if a lot of mild cases are being missed. But Bruce Aylward, a WHO expert, who led an international mission to China to learn about the virus and the country's response, said this has not been the case with Covid-19. The evidence did not suggest that we were only seeing the tip of the iceberg. If borne out by further testing, this could mean that current estimates of a roughly 1% fatality rate are accurate. This would make Covid-19 about 10 times more deadly than seasonal flu, which is estimated to kill between 290,000 and 650,000 people a year globally.¹⁰ The Linear Scales below shows total deaths and cases across the globe.

Fig 2. The linear scale of total deaths across the globe



Source: "COVID-19 CORONAVIRUS / CASES." *Worldometers.info*. 24 Mar. 2020. Web. 24 Mar. 2020. <<https://www.worldometers.info/coronavirus/coronavirus-cases/>>.

The figure above shows a continuous increase in the number of coronavirus deaths worldwide. Reaching the number in the thousands is a dangerous indicator that reflects the seriousness of the threat this virus poses to the whole world.

Fig 3. The linear scale of total cases across the globe

Source: “ COVID-19 CORONAVIRUS / CASES.” *Worldometers.info*. 24 Mar. 2020. Web. 24 Mar. 2020. <<https://www.worldometers.info/coronavirus/coronavirus-cases/>>.

This figure shows the continuous increase in the number of people infected with coronavirus around the world.

After weeks of spreading worldwide, the number of confirmed COVID-19 cases surpassed 330,000, and at least 15,000 deaths were blamed on the virus.¹¹ in over 150 countries worldwide. These numbers are based on the available information at the time of publication, depends on the availability of data from the affected areas. For that, all numbers should be taken with caution as the outbreak is evolving rapidly.

3-Practice social distancing to avoid coronavirus:

Aristotle the Greek philosopher said, “Man is by nature a social animal. His nature and necessities makes him a social being. He also depends on society to be a human being. He acquires personality within society. There exists a very close relationship between individual and society like that of cells and body.”¹²

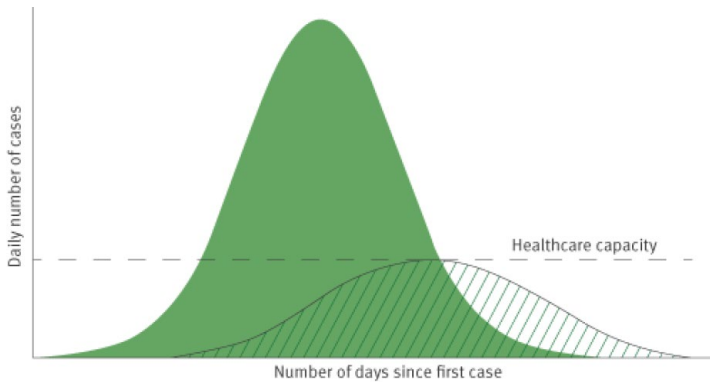
After we presented the seriousness of Coronavirus globally, we will devote this section in the beginning, to the meaning of social distancing, and then, to the extent of people's commitment to it globally. Notably, since we indicated that the individual is related to society as the cell is bound to the body.

3.1-Social distancing

According to the Santa Clara County Public Health Department Social distancing is a term applied to certain actions that are taken by Public Health officials to stop or slow down the spread of a highly contagious disease. The Health Officer has the legal authority to carry out social distancing measures. Since these measures will have considerable impact on our community, any action to start social distancing measures would be coordinated with local agencies such as cities, police departments and schools, as well as with state and federal partner.¹³ whereas according to the European Centre for Disease Prevention and Control “ Social distancing is an action taken to minimize contact with other individuals; social distancing measures comprise one category of non-pharmaceutical countermeasures (NPCs)¹ aimed at reducing disease transmission and thereby also reducing pressure on health services.”¹⁴

It becomes clear that containment alone is no longer sufficient as a means of delaying the peak of the epidemic, decreasing the peak magnitude to protect healthcare capacity, or protecting vulnerable groups at risk of severe outcomes (Figure 4).

Figure 4. Illustration of the objectives of social distancing measures to reduce and delay the peak of the epidemic and protect healthcare capacity



Source: “Considerations relating to social distancing measures in response to COVID-19 – second update.” Ecdc.europa.eu. European Centre for Disease Prevention and Control. ECDC. Stockholm. 23 Mar. 2020. Web. 23 Mar. 2020.

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3.2-The social distancing measures:

There are many measures taken in the field of social distancing; we will limit here to mention those that the ECDC referred, where they divided the social distancing into Individual social distancing and Social distancing affecting multiple persons.¹⁵

3.2.1-Individual social distancing includes:

- Isolation of cases: both confirmed or suspected cases.
- Quarantine of contacts: healthy person(s) who have had a high- or low-risk contact with a confirmed COVID-19 case.
- Stay-at-home: Blanket recommendation for the public to stay at home and avoid mass gatherings and close contacts with people, especially known high-risk groups.

3.2.2-Social distancing affecting multiple persons includes:

Social distancing affecting multiple persons includes:

- Closure of educational institutions: Schools (including daycare centers, kindergartens, primary and secondary schools), Closure of higher educational institutions (including universities, research institutes, etc.).

- Workplace closures: Closure of offices, factories, retail outlets, agricultural production, construction, restaurants, cafes/bars, sports clubs, haulage/transport, etc.

- Measures for special populations: Measures to limit outside visitors and limit the contact between the inmates/patients in confined settings, such as long-term care facilities, either for the elderly or persons with special needs, Psychiatric institutions, Homeless shelters, Prisons.

Mass gathering cancellations: Cultural events (theatres, cinemas, concerts, etc.), Sporting events (football, indoor and outdoor athletic games, marathon runs, etc.), Festivals, Faith-based events, Conferences, Meetings, Trade fairs, etc.

Cordon sanitaire/mandatory quarantine of a building or residential area(s): Refers to the quarantine and closing off of a building or whole residential area (city, region, etc.).

The process of practicing social distancing :

Here we will introduce some of the social distancing measures needed to stop the spread of the Coronavirus. Later on, let us try to see how realistic it is to adhere to it, according to the different cultures of people all over the world. Stay at home, avoid crowding, and refrain from touching each other.

In the US, On March 16, the White House announced a program called “15 Days to Slow the Spread,” which is a nationwide effort to slow the spread of COVID-19 through the implementation of social distancing at all levels of society.¹⁶ The United States Centers for Disease Control and Prevention (CDC) recommends that patients with suspected or confirmed COVID-19 be placed in a single-occupancy

room with a closed door and dedicated bathroom. The patient should wear a facemask if being transported out of the room (eg, for studies that cannot be performed in the room). An airborne infection isolation room (ie, a single-patient negative pressure room) should be reserved for patients undergoing aerosol-generating procedures... The CDC also stresses the need for residents should be encouraged to practice social distancing by staying home as much as possible...¹⁷

Although living like that can be lonely, inconvenient and even frightening, it's for the greater good, says Danielle Ompad, an associate professor at New York University's School of Global Public Health. "It's uncomfortable," she told CNN. "But it requires us to be good citizens. People have to learn how to think about the collective rather than the individual."¹⁸

The head of the World Health Organization's Africa region, Dr. Matshidiso Moeti, said on Thursday that most of the cases have been imported from Europe and so far there is relatively limited community transmission of the virus on the continent.¹⁹ Almost all African governments have publicly put in place strict screening at points of entry, especially airports. Cases of coronavirus have been confirmed in Algeria, Tunisia, Morocco, Egypt, Senegal, and Nigeria. African airlines have canceled scheduled flights to China except for Ethiopian Airlines.²⁰

The Algerian health ministry has confirmed 264 cases of coronavirus, the Algerian death toll climbed above 19 by 25 Mar. The Algerian government has already ordered a range of measures to prevent the spread of coronavirus, including shut down of schools and universities until April 5 to slow the spread of the coronavirus, a ban on spectators at football games and the suspension of all cultural, social and political gatherings.

To halt the spread of coronavirus, Algerian officials have instructed the public to practice social distancing -- staying home, avoiding crowds, and refraining from touching one another.

3.3-Respond to the social distancing:

Despite repeated pleas from government officials across worldwide to commit to social distancing to slow the spread of Covid-19, many people just won't. Gordon Asmundson, a professor of psychology at the University of Regina in Saskatchewan, is studying how psychological factors impact the spread of and response to Covid-19. He's broken us all down into three groups based on our response to the pandemic: Over-responders, under-responders and those who fall somewhere in between.

The over-responders are the panic buyers who have stockpiled months worth of supplies. They're scared, and buttressing themselves with stacks of toilet paper is empowering them and easing that fear.

The people in the middle are doing what they're being asked to do without panicking or acting too lax -- they're pandemic Goldilocks.

Under-responders are those disobeying public health guidance - the ones who consider themselves invulnerable. They aren't following social distancing because they believe they won't get sick, even though it could prevent more vulnerable people from becoming infected.

Officials of the governments of the countries of the world taken new enforcement measures for people disobeying social distancing orders (Under-responders). they fine businesses for not following physical distancing rules and they fine individuals who are ignoring the guidelines as well.

In France, police are patrolling streets to enforce a nationwide lockdown which will see violators hit with fines unless they have a written declaration explaining why they are outside. Spain, Brussels and Italy are all under similar lockdowns as their countries struggle to contain the outbreak.²¹ Other countries imposed the curfew after citizens failed to heed instructions of social distancing, and they have deployed the armies to enforce the measure.

Other countries imposed the curfew after citizens failed to heed instructions of social distancing, and they have deployed the armies to enforce the measure. From these countries, Jordan, which its government has warned that people caught breaking the rules, would be quarantined for 14 days and could also face up to one year of jail

time. And more than 1,600 people have been arrested in this country (Jordan) in three days for violating a curfew aimed at stemming the spread of coronavirus.²²

In the UK, Based on the advice of its team of epidemiologists, behavioral scientists, and virologists, the UK government is leaving it down to citizens to choose how closely they stick to its health advice, for now at least.²³

4-Discussion:

As we have seen, governments' responses to imposing the application of social distancing have varied, but they all agree that it is the only way that, although not limiting the spread of the virus, at least slows down its spread. In fact social distancing won't just require government-level decisions — individual people will need to take steps to change their daily routines, based on their own judgment and the local situation.²⁴ “Social distancing sounds humble, like washing hands,” said Caitlin Rivers, an epidemiologist at the Johns Hopkins Center for Health Security. But during the West Africa 2014 Ebola epidemic, one of the key strategies that helped stem the outbreak was people in the communities changing their behavior to minimize contact with others, she said.²⁵

Finally, it is important to note that the term ‘social distancing’ focuses on reducing physical contact as a means of interrupting transmission, but while reduction of social contact may be an outcome of that, it is not a specific aim. Indeed, the success of social distancing measures that are implemented over an extended period may depend on ensuring that people maintain social contact – from a distance – with friends, family and colleagues. Internet-based communications are therefore a key tool for ensuring a successful social distancing strategy.²⁶

From the above, we conclude that there is no doubt about the importance of the social distancing in slowing the spread of Coronavirus at this time, as there are no specific vaccines or treatments for COVID-19. And its application has proven successful in China.

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