

Random Statistical Models on Which Health Protocols for the Corona Virus Pandemic are Based, at the Level of Educational Institutions

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Humanity is living in a difficult stage in the history of the world, and the indicators fully suggest that it is a stage that will pass and go on despite its continuation, cruelty, bitterness and difficulty, and until today the world is searching for an effective treatment for the "Corona" virus, and there is no treatment in sight soon, and quarantine and social distancing have been adopted, in order to Reducing the chances of infection with the disease and controlling the windows of its spread.

In light of the rapid deterioration of the situation of the Corona virus in the world, countries are rushing to implement new strict measures and measures to confront a possible fourth wave before the winter season.

Through the multiple indicators of statistics, whether descriptive or analytical, specialists seek to provide logical exploratory evidence that can simulate and harmonize the models followed by the phenomenon and anticipate future results in order to manage the future of the results of the approved models and project their consequences on the outcome of the pandemic in reality.

By re-reading the repetition of the numbers obtained in the field and laboratory, it helps us that this is the future of the form that the pandemic results data take cannot happen by chance, and therefore it is necessary to prepare to make the reality of the living without risk, and reduce the probability ratio for the sample space of the number and results of injuries in the pandemic.

The random probabilistic models used in tracking the results and numbers of the spread of the pandemic and its results represented in the number of infections, and the resulting deaths indicate the emergence of mixture models that express different cases in a multiple manner that expresses the values of the peak of the outbreak or deaths, which are indicators that indicate the turning point before which the procedures are tightened until they reach To full stone, then when humans cross this peak, procedures begin to fall back and ease.

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The instability of the indicators of the models indicates the presence of error in the estimates and the decline in the knowledge of the causes of the crisis and confronting it, which means a huge mistake in lives, and the people and the economy will pay a heavy price in the event. Much more, and underestimating the estimates means that the disease will spread in a large way that it is difficult to avoid, and the disease may exceed the limits of control, hospitals are teeming with patients, and sorrows increase with death, as the arithmetic accuracy in statistics and correct estimates is the difference between the two things, and here it appears that the statistics science that we face with its products The causes and consequences of the spread of the Corona pandemic today among learners and teachers at various levels of education.

The process of building statistical models that expresses the data path of the number of



prevalence cases, and their results, requires the use of multiple techniques, and the statistical model is usually determined through mathematical equations that link one or more random variables and perhaps other non-random variables, and as such, the statistical model It needs comprehensive data or obtained through surveys using the sampling method according to the law of statistical regularity, which aims to collect field data, which is to measure the extent of the pandemic's impact on educational activities compared to its performance before the pandemic, and it contributes to completing the data for this survey by expanding the scope of data collection .

There are many means, and specialized medical centers remain the main source, and information on the results is provided to leaders specialized in formulating policies and making decisions based on accurate data to achieve stability for various educational activities in a tangible way at the targeted levels.

The health leadership in various Arab countries relied on the results of simulating daily numbers, which are vague numbers that reduce their reliability and credibility for reasons that differ from one country to another, and whose experiences vary in the outbreak of the Corona virus, according to a set of precautionary standards adopted, and the policies taken to manage the health protocols for the Corona pandemic, which are linked There is a big side to the problem of the study represented by the random statistical models on which the health protocols for the Corona pandemic are based at the level of educational institutions.

Study problem and objectives: Most Arab countries have taken a set of proactive measures to combat the Covid-19 pandemic despite the fluctuation of the peak of the virus outbreak during the previous two years, and with the differences in the models followed by the pandemic data and the complexity of the mixtures of models in a varying manner from one stage to another, the mechanisms of deducing the authorized numbers, which The differences in the estimates appear from the height of the outbreak, and here appears the difference in the procedures adopted from one country to another, although the tool of statistical models is the same adopted by specialists in these countries today to combat this disease. And we can excel in the face of Corona, and for this we must use it wisely and rationally, and we must understand that the theories on which scientific knowledge is based, where the results that are reached are based on reliable data.

The random statistical models on which health protocols are based show fluctuation in the estimation of their parameters, and accordingly the methods of data analysis and better understanding are complicated, and the problem continues with regard to solving complex research and business problems through an easy-to-use interface, in addition to quickly understanding large and complex data sets through procedures advanced statistics that helps those in charge of tracking the contour of data using generalized models despite the practical complexities.

Study Questions: Probabilistic models are built according to statistical standards to ensure coverage of most of the data and to produce indicators that measure the effects of the precautionary measures that were put in place to limit the spread of the virus, and its consequences, as well as knowledge of the general behavior of the pandemic in the context of current variables. In

order to understand the topic, we define the following questions:
1- What is the extent of the adoption of the quarantine and social distancing policy that reduced the chances of spreading the disease?

2- How does data science help to confront the emerging corona virus?

3- How is it with the developments of the new waves of corona, the increase in deaths and their causes?.

According to what is known, data science is able to do a lot of efforts to combat the Corona virus, such as creating interactive dashboards, analyzes of epidemiological models, and suggesting the best policies included in the approved health protocol in the fields of education and education to help reach the lowest percentage of infections and the immunity of the herd that responds to treatments People infected with the virus, and achieving zero deaths from pandemic infections, and here it is necessary to do parametric tests in the case of reliable sample data, or move to non-parametric tests, which are tests that are not based on the normal distribution of data, while based on freely distributed data or Random distribution data, which is the most cases of complex models in such a situation.

Specialists in building sequential probabilistic models of the spread of the epidemic and the accumulation of consequences wonder what if we were wrong in finding models from which reliable decisions emerge, and if the decision was wrong, we are faced with two possibilities.

The first is that we may be less while we are preparing for the worst, and this mistake only has an economic cost, "and it can be afforded", but the second possibility is that if we are wrong and we are actually in a society with greater injuries, we may face a greater health problem than we expected, and this is It can also be accepted for two things together, the first is that we put the probability of error to the lowest possible level, and the second is that we know the larger community that is infected and the one that is close to us and we may prepare for that as well.

Also, giving in to fear in a way makes us exaggerate the error in order to avoid the worst, and it causes a wrong decision and a waste of very huge human resources and stops the wheel of building future energies, which is the resource for improving the products of a happy life for a long period of time, considering that the quality of education outputs is the basis of any progress In the future we do not need to lose it.

Health specialists wonder whether the emergence of new waves and chains will force the adoption of new protocols for attendance in educational classes, and how to deal with the direct return of students to schools, who are the large numbers, especially since the rate of their vaccination has not reached the level of societal immunity. The fear of parents and officials in the field of education is communicating with leaders in health and the fight against epidemics in order to take the measures required by the defense policy of the societies.

The World Health Organization expects the delta mutant to become dominant in the coming months and is so contagious that it is behind 75% of new cases of COVID-19 in a number of countries. In light of these developments, pressure increased on countries to speed up the vaccination rate and implement strict



measures in anticipation of the fourth and fifth wave before the winter season. The World Health Organization expects hundreds of thousands of people to die from the Corona virus in Europe by the spring of 2022, warns the European branch of the World Health Organization and the organization believes that there are factors behind the current increase, including the Delta strain, which is more capable of spreading.

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