



## **Science Academy Statement on Precautionary Measures Against the Covid-19 Pandemic**

**Summary:** The recent increase in the number of daily cases of coronavirus in Turkey once again demonstrates the vital importance of accurate information and scientific research in the fight against the pandemic. The lifting of restrictions on 1 June needs to be reviewed and new measures need to be put in place to contain the situation. The effectiveness and success of the current policies depend on the existence of data-driven research on epidemiology, immunology, modeling, clinical medicine, economics and social science conducted in a transparent manner based on public participation and trust.

### **1. Characteristics of the Pandemic**

The pandemic caused by the COVID-19 virus has left the world confronted with the many unknowns of a new and very contagious virus that differed from the previous ones. Mistakes have been made while trying to learn about these unknowns rapidly.

Science is the only tool available to humanity for not repeating mistakes and learning more about the virus. It is necessary to learn from the evidence, observations and experiences produced by science. Studies on the economic and social effects of the pandemic, as well as epidemiological and clinical research, can only be conducted based on data and with the free exchange of information among scientists. A salient feature of pandemics is that cases increase exponentially depending on the frequency of contact between infected cases and the majority of the population who have not yet been infected. It has been observed that the pandemic increases very rapidly if no measures are taken, but that it dramatically decreases with the application of measures. For this reason, it is extremely important to analyze the clinical characteristics of the disease and immunity based on data, as well as the frequency and quality of contacts in society, and to be able to predict the possible consequences of different policies in a timely manner.

The pandemic will continue to spread until a vaccine is available or herd immunity is established in the society. While some countries tried to leave the pandemic to its natural course and later gave up after paying a price, Turkey, rightly so, did not choose to go in this direction. The important point, while working towards striking a slow and long term balance, is not to increase the number of deaths through

trial and error and alternately introducing and loosening restrictions, but instead to keep the number of positive cases both low and at a level that will increase gradually and keep the mortality rate at a minimum. In order to manage the pandemic well in terms of its medical, economic and social aspects, there is no other way than to ensure the rapid and efficient progress of scientific research and to identify policies compatible with the results of such research. For this, data such as when and how often the pandemic is seen in the country, distribution of age groups, working conditions, districts and workplaces should be made available to the public and scientific discussion should proceed with due diligence and impartiality.

## **2. Situation in Turkey**

In Turkey, closing of schools, banning of public gatherings in indoor spaces, and limiting the mobility of the highest risk group, of people over the age of 65, at an early stage proved to be efficient measures, and the number of deaths was kept under control to some extent. By the end of May, the number of new cases was slowly decreasing. As time passed, we had the possibility and advantage of learning from our own experiences as well as from the experiences of other countries.

Scientists predicted that, even with the limited data released to the public, the sudden lifting of the entire set of measures on June 1 could cause an increase in cases around June 15, which is what we are witnessing these last few days. The result of the sudden opening has been reflected in the number of new cases which increased by about 100 to 250 every day. As scientists pointed out regarding this decision on June 1 and previously, this upward trend may be curbed quickly if measures are introduced again.

## **3. What needs to be done for the efficient use of scientific research and results?**

### **a) For scientists**

**Making data accessible:** Data must be available to researchers in detail and in a transparent manner for science to reach fast and reliable results. As in many other countries, data should be open to scientists and the public, such as where and how often the disease is seen, organized by age groups, working conditions, districts and workplaces, number and methods of tests and contact tracing, and how many times a test was applied to the same person. It should be noted as an important positive step, despite the delay, that immunization research has started with antibody tests over random samples of the country's population. Results of these tests should also be made public.

**Lifting barriers to research:** The Science Academy released a statement on May 12 criticizing the introduction of control and approval procedures on COVID-19 research by a "COVID-19 Scientific Research Evaluation Commission" within the Directorate General of Health Services.<sup>1</sup> In the same statement, we underlined the drawbacks of such a mechanism with no information on the composition

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<sup>1</sup> <https://bilimakademisi.org/covid-19-arastirmalari-hakkinda-bildirim-yukumululugu-sakincalidir/>

or clearly defined criteria for the operation of this Commission. There would also be a redundancy of this new mechanism and the already existing bodies such as Ethical Committees and the evaluation panels of The Scientific and Technological Research Council of Turkey (TÜBİTAK). Since then, we have seen that many researchers were rejected without any justification, including some research projects that have received support from TÜBİTAK. Some researchers were asked to apply to other authorities which were not announced previously as part of the new approval process. As a result, research that has already been approved by scientific evaluation panels cannot be funded. If the scientists that the commission has not approved can continue their research with their own resources, will their research results not be used by the authorities then? It is not easy to make sense of the prevention of scientific research during such a critical situation. The cost of preventing or delaying research and adopting policies not based on more scientific work would be loss of lives and economic resources.

**Ensuring space for open discussion:** Reliability of scientific research can be ensured through sharing of results among scientists and testing them via open critical discussion. This testing, which is normally provided by the refereeing mechanisms of scientific journals in the international arena, is not fast and effective enough in the emergency conditions of the pandemic, even though the refereeing process of international scientific journals on pandemic related science has been accelerated. While comparing the results of ongoing research based on open data it is necessary to provide space for open discussion and criticism among scientists which would eventually lead to providing more reliable results to decision makers. In a time of pandemic, providing reliable results with possible margins of error should come before scientists' career ambitions and motivation to publish. Councils and institutions with the responsibility to organize scientific research and provide scientific advice should refrain from restricting the publication of research, artificially combining studies and interfering with author lists.

**b) For the public:** There is always going to be some people who do not comply with the measures for psychological reasons, economic and social imperatives, arbitrary behavior and lack of comprehension. To minimize the number of such people, it is necessary to explain what scientific and reasonable justifications are behind the measures in place. It would be useful for the public to know where the pandemic is, at what level, when and where it has increased rapidly; not through selectively chosen striking examples but through consistent provision of information. For example, if people know what the situation is like in the villages, cities and resorts that they are planning to go to, they can make decisions based on accurate information instead of on panic. Likewise, being informed about the background of the decisions and the findings behind these decisions will increase levels of public participation and trust. Timing of the announcement of measures should also be such as to allow the public to take these measures without any risks. Frequently changing decisions without providing justification adversely affects peoples' compliance with the measures.

**c) For policy makers and administrators:** As we are facing an unprecedented tragedy, decision makers in each country have experienced trial and error. However, what is most important at the present stage is transparency and the necessity of making decisions based on scientific reasoning. The biggest problem in this regard is that the Scientific Advisory Board does not have a website, its decisions or recommendations are not shared with the public and the final decision maker(s) is not known. Members

and functions of the recently founded Social Sciences Board are not clear either. It is very important to share with the public the scientific data behind the decisions taken, as well as to clarify the mandate of the Boards consulted by the Presidency and the Ministry of Health and the coordination between the institutions.

Clarification of the points above would be instrumental for the accuracy and efficacy of policies, as well as public participation and trust and for scientists to carry out to lead to correct results that will be effective for Turkey -and would therefore serve the success of the policy decisions taken.

On its popular science website sarkac.org the Science Academy publishes information on scientific data and results to inform the general public. We also continue scientific presentations, discussions and critique in webinar format for the general public and for scientists. We are ready to do our best in terms of explaining the contributions of scientific work to the public and providing any science and information services requested by the decision makers.

We believe in the potential and future of our country and also believe that it is our duty, with a sincere sense of responsibility, to respectfully present this statement to the information of the authorities.

We also share our statement with the public with due respect.

**Executive Board of Science Academy**

**16 June 2020**