

Under-reporting of COVID-19 cases in Turkey

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Summary

Having an accurate account of the number of national COVID-19 cases is essential for understanding the national and global burden of the disease and managing COVID-19 prevention and control efforts. There is also substantial under-reporting of COVID-19 cases and deaths in many countries. In this article, the COVID-19 under-reporting problem in Turkey is addressed, and examples and reasons for the under-reporting are discussed.

KEYWORDS

cause of death, COVID-19, outbreak management, under-reporting

1 | BACKGROUND

The novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), more commonly known as COVID-19, has caused economic and public health disruptions around the world.¹ Addressing the COVID-19 pandemic requires economic and public health coordination at international, national, and local levels.²

After COVID-19 became the most important public health problem in many countries, the difficulties of conducting cross-country comparisons began to be discussed. There are many challenges in comparing COVID-19 statistics across countries.^{3,4} For example, it takes time to develop reliable tests and criteria for the diagnosis of COVID-19 in the early stages of the disease; many countries use different diagnostic criteria; it is difficult to determine cause of death of those patients display few of the known COVID-19 symptoms; the leaders of some countries do not allow sufficient transparency in the flow of information on the disease; and countries have cultural and lifestyle differences, such as living together as a big family with family elders.

There is also substantial under-reporting of COVID-19 cases and deaths in many countries. For example, the total death tolls in Italy⁵ and the Netherlands⁶ are more than twice the official reported numbers. In Spain,⁷ the United Kingdom (UK),⁸ and the United States (US),⁹ mortality due to COVID-19 is 10%-60% higher than the officially reported figures. The differences are particularly stark in countries that have been slow to acknowledge the scope of the problem. In March 2020, the Indonesian government attributed 84 deaths in Jakarta to the coronavirus.¹⁰ However, 1600 more people than normal were buried in Jakarta's cemeteries that month, according to city officials. China has also been accused of under-reporting the extent of the coronavirus outbreak.¹¹ Health experts question the timeliness and accuracy of China's official data, asserting that the testing system only captured a fraction of the

cases in China's hospitals, particularly those in poorly run hospitals. In addition, it is stated that Iran's coronavirus cases are vastly under-reported.¹²

The authorities in Indonesia,¹⁰ China,¹¹ Iran,¹² and Turkey¹³ have been charging people under criminal defamation laws for their online comments about COVID-19 and their government's response. In contrast, the governments of some countries have begun retrospective research and corrections to accurately report the death toll from the outbreak. Authorities in Belgium and France are including COVID-19 deaths outside of hospitals in their daily reports and are adjusting the overall COVID-19 death totals once deaths are confirmed in other places, such as nursing and retirement homes.⁵ Deviations from normal death patterns have been confirmed in many European countries. In this article, the COVID-19 under-reporting problem in Turkey is addressed, and examples and reasons for the under-reporting are discussed.

2 | THE COVID-19 UNDER-REPORTING PROBLEM IN TURKEY

COVID-19 first appeared in Wuhan, China, in December 2019. On January 30, 2020, the WHO declared COVID-19 a public health emergency, giving the situation international importance.¹² As of May 26, 2020, 5 622 939 COVID-19 cases have been confirmed worldwide, 348 715 deaths have occurred, and 2 393 539 patients have recovered.¹⁴ According to the Turkish Ministry of Health (MoH), the first COVID-19 patient in Turkey was identified on March 10, 2020, and the first death due to COVID-19 occurred on March 15, 2020. By April 1, 2020, it was confirmed that COVID-19 had spread throughout Turkey. Although the country's first death from COVID-19 was recorded on 15 March,¹⁵ the number of deaths overall in March 2020 in Istanbul was already higher than historical averages, indicating that the virus had arrived several weeks earlier.

In Turkey, as of May 29, 2020, the total number of tests conducted was 1 928 209, the total number of cases was 169 979, the total number of deaths was 4461, and the total number of recovered patients was 124 369.^{14,15} Only cases with positive polymerase chain reaction (PCR) test results are included in these statistics; suspected/possible cases in hospitals or from ambulatory follow-ups are not included. As such, the reported statistics do not reflect the actual situation in Turkey. The Turkish Medical Association (TMA) reported that more COVID-19 cases and deaths have been reported by physicians in the field and in the local branches of TMA than those reported by the MoH.^{15,16}

The Turkish MoH is trying to manage and coordinate the process of combating the epidemic with the Pandemic Science Board (PSB). The biggest criticism of the Pandemic Science Board, mostly coming from clinicians, is that it does not have public health experts and epidemiologists in it.^{17,18} Furthermore, it has also been reported by TMA that the MoH has not accepted the participation of the Association of Public Health Experts (APHE), TMA and regional TMAs in national and local branches of PSB. To combat the COVID-19 pandemic, the following measures have gradually been taken: the flight ban, the closure of schools and public institutions, the implementation of flexible working schedules and working from home practices, limitations on overseas and domestic travel and mobility, the restrictions on entry and exit to metropolitan areas, the implementation of a curfew for those under 20 years old and over 65 years old, and curfew on the weekends.¹⁸

TMA reported that there is a "frightening" increase in the number of COVID-19 deaths in Turkey.¹⁷ There is also talk of inconsistencies in the figures, with TMA and some public health professors stating that the COVID-19 statistics in Turkey are not as reliable as those in many other countries. As such, the numbers of COVID-19 deaths announced by the MoH are being treated with suspicion by many professional institutions, public health experts, and university professors.^{17,19}

Using burial data from the E-State system, the Turkish Thoracic Society (TTS) compared the total weekly burial numbers of the Istanbul (population = 15 519 267) and Trabzon (population = 808 974) provinces for January-April 2020 with the total weekly burial numbers for 2016, 2017, 2018, and 2019 in the same period.²⁰ A statistically significant increase was found in the number of deaths in 2020 (first 15 weeks) compared to the same period in the

other years. According to TTS, a 10% increase in the number of weekly deaths in Istanbul was observed from the 10th to the 15th week of 2020, and the total number of burials in the 15th week reached 2222. This number was 1389 in 2016, 1464 in 2017, 1460 in 2018, and 1425 in 2019. Therefore, TTS stated that 800 more people died during the 15th week in Istanbul in 2020 compared to the average over the previous 4 years. Although the MoH reported the number of COVID-19 deaths throughout Turkey in the 15th week as 624, TTS reported that the higher number of deaths could be due undiagnosed COVID-19 cases.²⁰

Furthermore, TTS reported that the number of deaths began to increase in the 11th week of 2020 in Istanbul. Between 11th and 15th week, there were 7076 deaths in 2016, 7267 deaths in 2017, 7302 deaths in 2018, 7303 deaths in 2019, and 9538 deaths in 2020.²⁰ The Turkish Minister of Health, Dr. Fahrettin Koca, has compared Istanbul to Wuhan, the Chinese city where COVID-19 first emerged, calling Istanbul the epicenter of the infections in Turkey.²¹ A similar situation was also found when the burial statistics of Trabzon province were examined by TTA. The weekly increase in the death rate for the first 9 weeks of 2020 was 25.3%. The total number of deaths per week in Trabzon province reached 102 in the ninth week; for the same periods in 2016 and 2019, that number was 31-45. The analysis of this mortality data suggests that there were deaths in Turkey from COVID-19 before the first reported death in the country in mid-March 2020.²⁰

TMA and APHE reported that MoH did not use the International Classification of Diseases, Tenth Revision codes (ICD10) recommended by WHO in reporting COVID-19 deaths.¹⁶ In some provinces, infectious disease/natural death has been reported as the cause of death on death certificates of people who died due to COVID-19.^{15,16,20} Dr. Serdar Savas, former the Vice President of the European Regional Office of the WHO and former deputy under-secretary of the MoH, reported that if the laboratory test results on blood samples taken from patients who have died are still pending, COVID-19 is not listed as cause of death on their death certificates. Therefore, Savas stated that the COVID-19 death figures announced by the Turkish MoH are definitely below the actual figures, and the infected number of people is around one million.²²

Some reasons have been given by the officials to explain the inconsistencies between the official COVID-19 figures for Istanbul and the burial statistics.^{5,18,20} First, due to testing capacity issues and false negative test results, some patients are registered with a secondary ICD10 code, such as pneumonia or infectious disease, when they die with clinical COVID-19 symptoms. Second, due to travel restrictions, curfews, and other measures, some patients have been buried in Istanbul instead of their hometowns, which has increased the number of deaths recorded in Istanbul. Third, restrictions on access to health services and fears about going to hospitals due to overload of the hospital system have led to a reduced demand for health services, which has, in turn, led to a higher mortality rate.

Meanwhile, there are daily reports of attempts to silence TMA and its regional branches through legal measures to ensure that no one shares COVID-19 data outside the MoH. After TMA-Sanlıurfa (a city in the southeast part of the country) President Omer Melik and Secretary General Osman Yüksekayla shared data on coronavirus cases in Sanliurfa on their social media accounts, they were detained for misleading the public and released under the condition of judicial control.¹³ In addition, restrictions were imposed on the social media accounts of the Izmir Medical Chamber.²³ TMA's regional branches started to compare COVID-19 cases and deaths from field workers with MoH data and share differences with the public by using their social media accounts.

3 | CONCLUSION

This article reports that COVID-19 statistics are being underreported in Turkey. TMA, APHE, and other health-related associations are prevented from actively participating in the fight against COVID-19, data sharing by health professionals working in the field is considered a crime, and health associations that comment on the deficiencies of the MoH in the fight against COVID-19 are marginalized.

Under-reporting occurs in every disease outbreak worldwide; however, keeping track of the COVID-19 outbreak in developing countries has been particularly difficult. Having an accurate account of the number of national

COVID-19 cases is essential for understanding the national and global burden of the disease and managing COVID-19 prevention and control efforts. As such, associated factors need to be addressed in order to reduce under-reporting. Reliable reporting enables epidemiologists to predict a disease's trajectory, researchers to develop treatments and vaccines, responders to trace transmission, and the public to protect itself. Full transparency is impossible without public trust, and authoritarian regimes have a steady deficit of public trust. Strong, transparent, and accountable leadership and communication strategies at all levels are crucial in COVID-19 outbreak management to ensure the successful control of epidemic and to prevent secondary problems. When democracy-related indicators are evaluated, it is evident that countries with lower rankings face more COVID-19 under-reporting problems. For example, the Democracy Index (DI)²⁴ and the World Press Freedom Index (WPFI)²⁵ scores of Turkey (DI rank: 110, WPFI rank: 154), China (DI rank: 153, WPFI rank: 177), Indonesia (DI rank: 64, WPFI rank: 119), and Iran (DI rank: 151, WPFI rank: 177), are behind those of many other countries in 2019.

CONFLICT OF INTEREST

No potential conflict of interest was reported by the authors.

AUTHOR CONTRIBUTIONS

All authors have equal contributions.

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