

Deaths due to COVID 19, Lockdowns, Vaccinations and Weather Temperatures: The Case of Greece

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The aim of this paper is to present Greek daily descriptive statistics on confirmed deaths due to COVID 19, the days of lockdown and their effect on the number of deaths, the outcomes of vaccinations and the influence of weather temperatures. Do lockdowns work in bringing the number of deaths down? The descriptive evidence shows that this is the case even though there is a considerable lagged effect. On the other hand, vaccinations, during the time period of examination, do not seem to have diminished the number of deaths, but the reason might be that it takes time for their full effect to occur. Finally, this paper also examines the hypothesis that during the summer months the daily deaths from COVID 19 are relatively lower than during the winter months. Using average daily weather temperatures, this hypothesis cannot be falsified. Simple calculations of the functional relation between weather temperatures and deaths shows that temperatures above 28.5 degree Celsius (°C) were associated with zero deaths.

Keywords: Covid 19, Deaths, Greece, Lockdown, Pandemic, Vaccinations, Weather Temperatures

Coping with the Pandemic: The Lockdown Days

Lockdowns	First Day	Last Day	Duration in Days
1	11 March 2020	31 May 2020	82
2	9 November 2020	31 January 2021	84
3	16 March 2021	17 May 2021	63

Figure 2. *Daily Number of Deaths due to Covid 19 from 26 Feb 2020 to 14 Jun 2021*

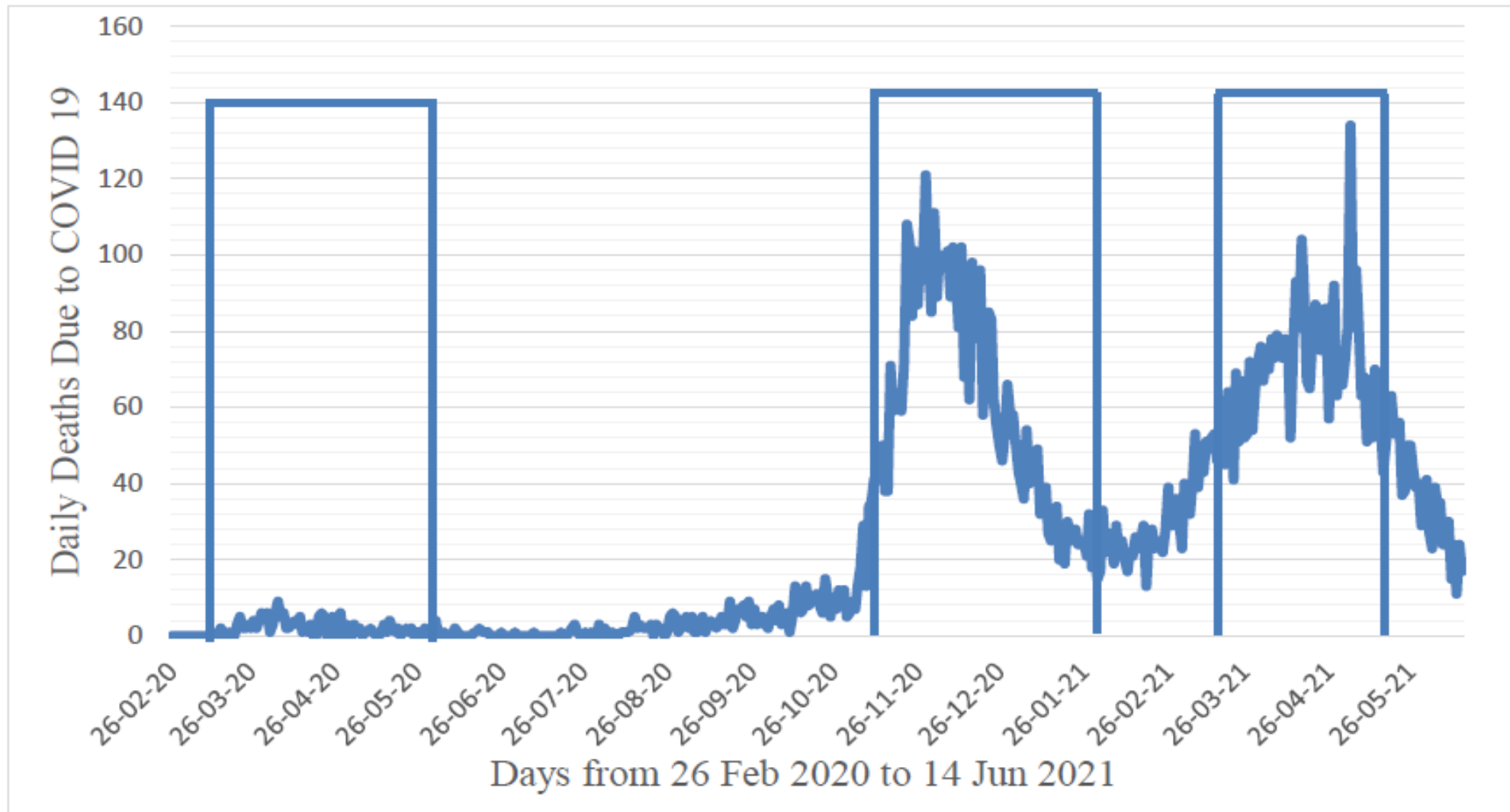


Figure 4. *Number of New Vaccinations per Day from 28 Dec 2020 to 14 Jun 2021*

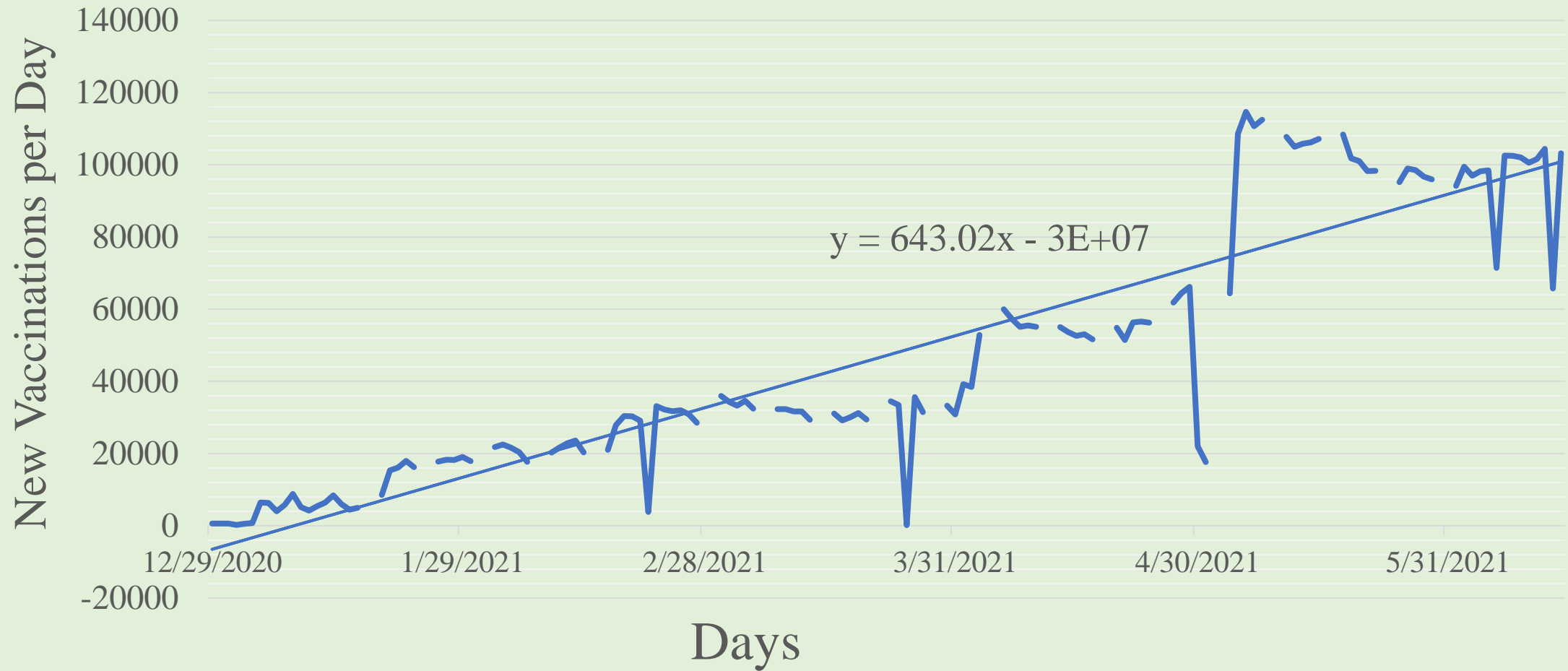


Figure 5. *Total Number of Vaccinations and Daily Deaths due to COVID 19 from 26 February 2020 to 14 Jun 2021*

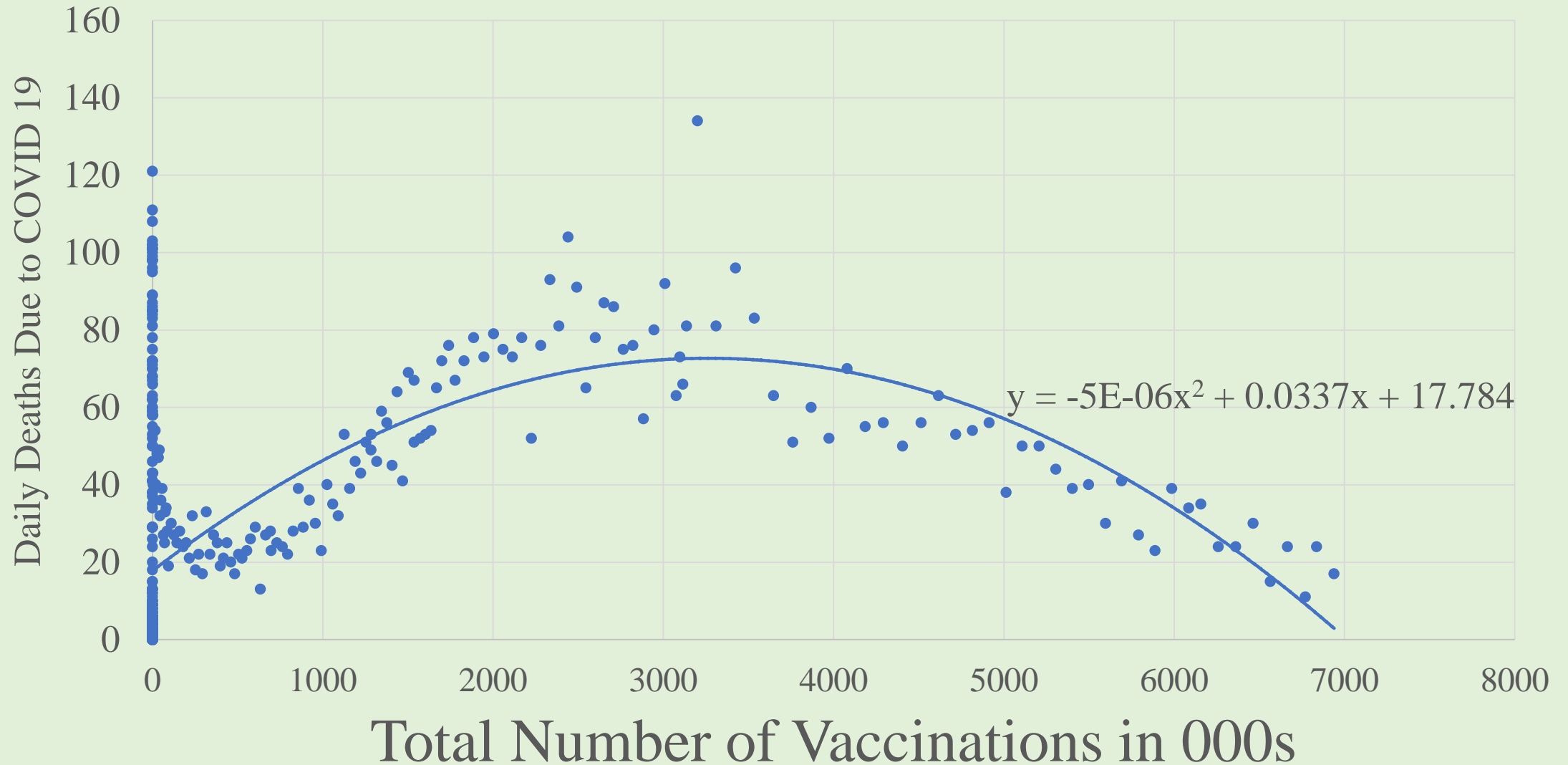


Figure 6. *Total Number of People Vaccinated and Daily Deaths due to COVID 19 from 26 February 2020 to 14 Jun 2021*

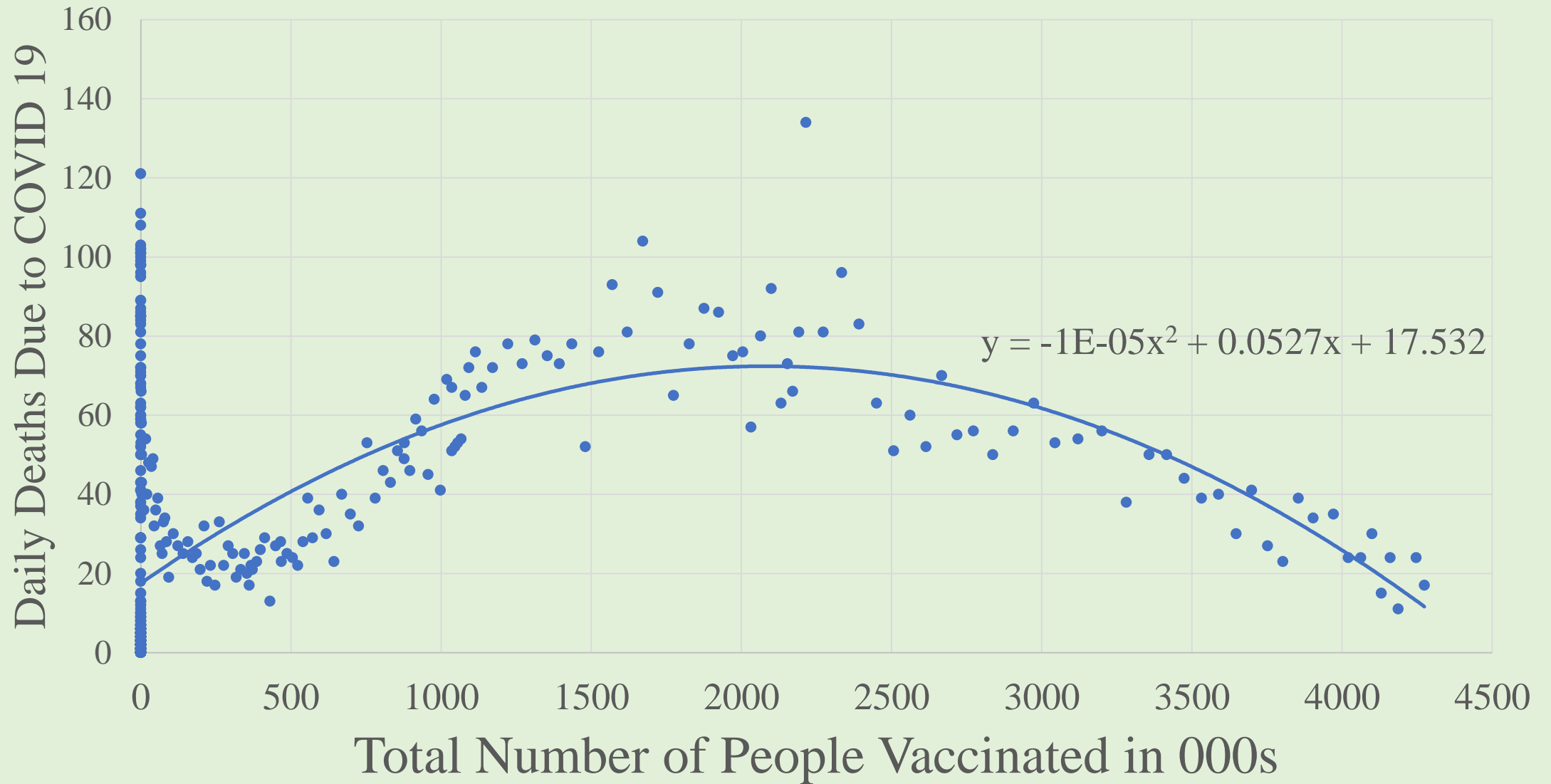


Figure 7. *Weather Temperatures from 26 February 2020 to 14 June 2021 in °C*

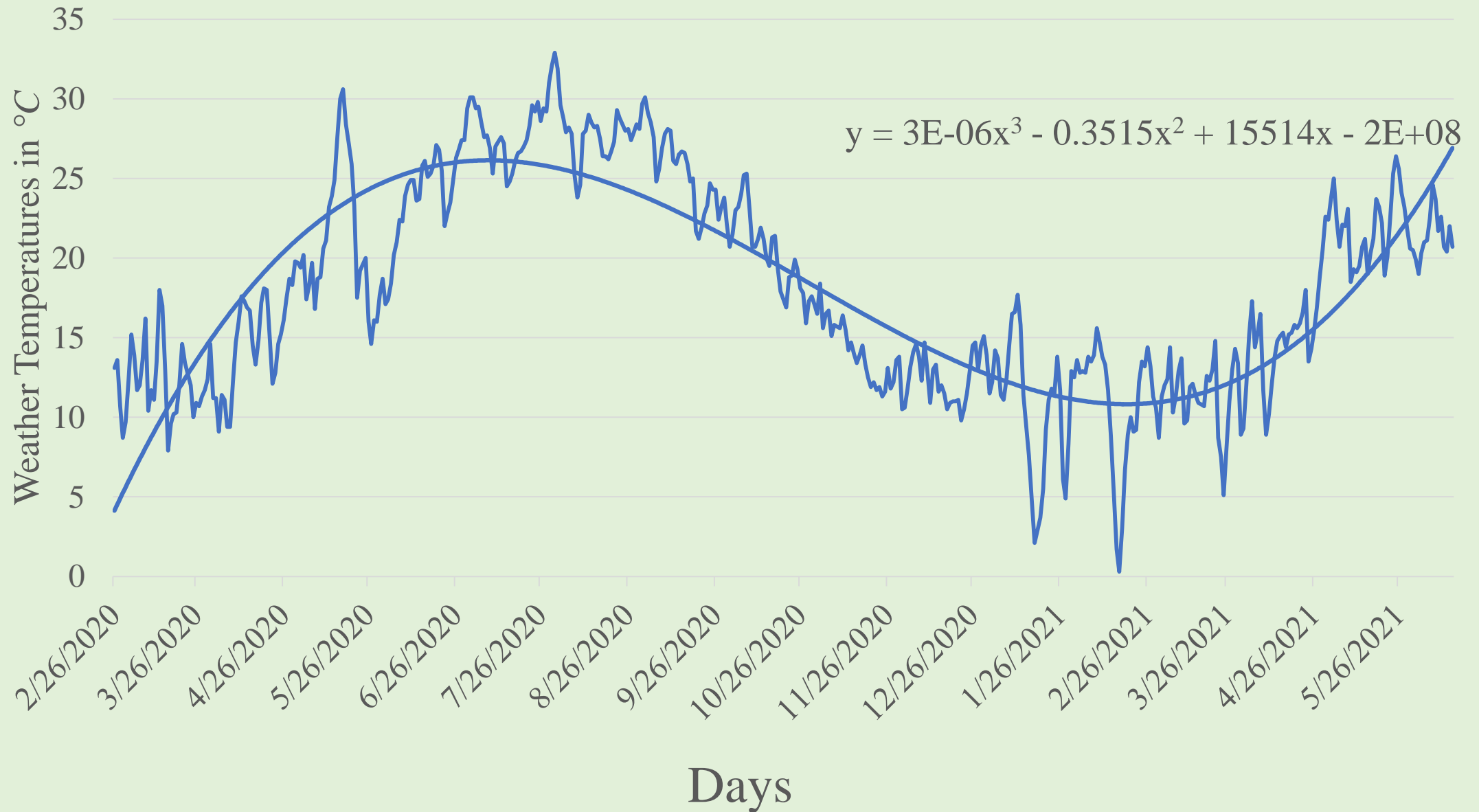
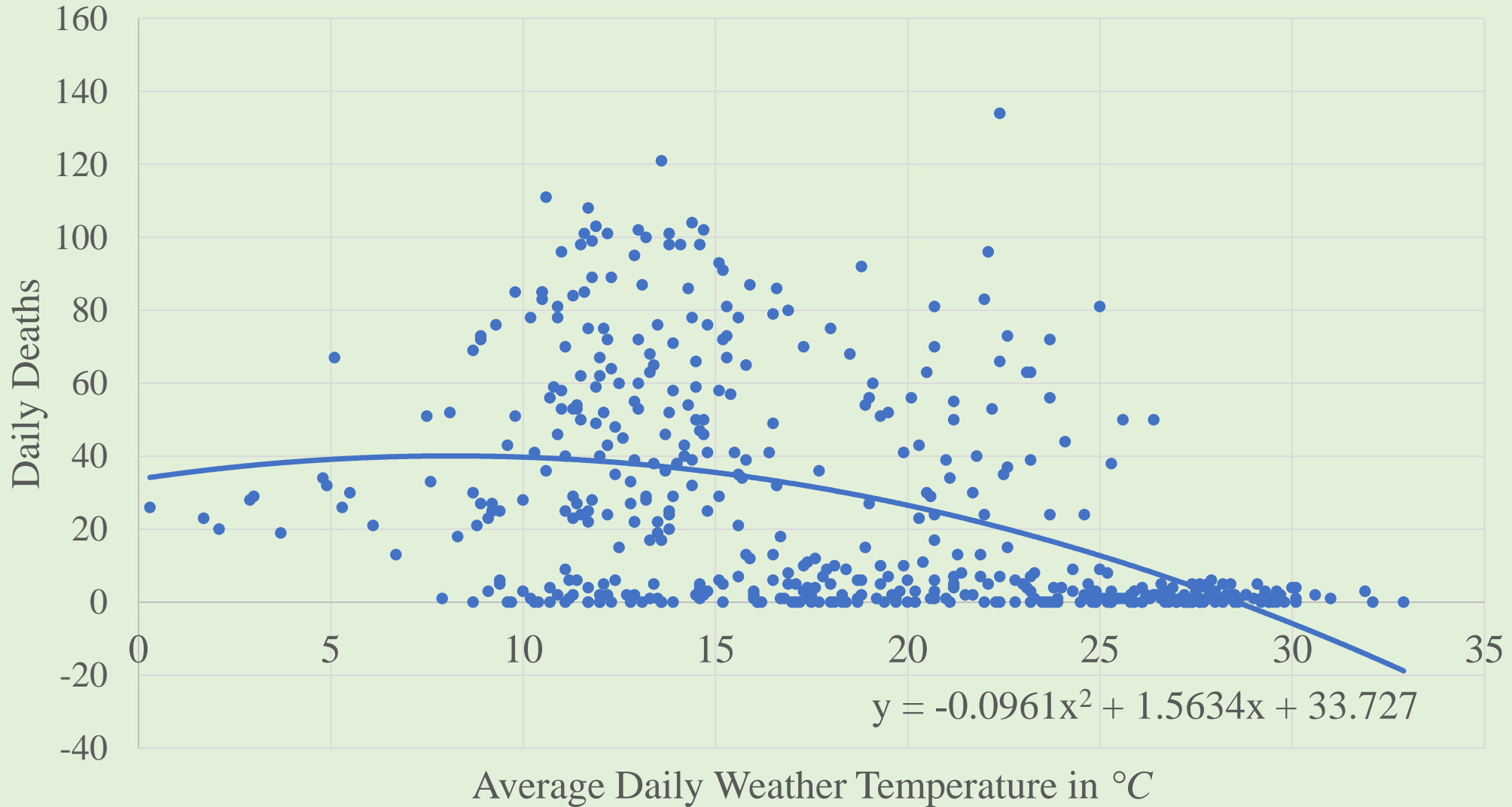


Figure 8. *Weather Temperature and Deaths from COVID 19*



Conclusions I

The descriptive evidence shows that during lockdowns the number of deaths from COVID 19 do decrease after a certain time period reversing an initial upward trend. From the three lockdowns, this was the case in the last two lockdowns. The first lockdown was implemented early on when the number of deaths were zero and therefore it had an immediate effect in preventing the number of deaths from rising.

Conclusions II

The second conclusion relates to the total number of vaccinations and the total number of people vaccinated. The latter figure is lower because with the exception of one vaccine all others require two doses. Thus, the first figure includes people who have been vaccinated twice. The descriptive statistical evidence shows that initially the association between vaccinations and number of deaths was positive, but it quickly turned into a strong negative, indicating that vaccinations do work.

Conclusions III

The last conclusion relates to weather temperature. The hypothesis that high weather temperatures reduce the infections and therefore the deaths from COVID 19 is not falsified. At zero °C, the daily number of deaths was found equal to 34 deaths. As temperatures increase the number of deaths decrease. At 28.5 °C, the number of deaths was found to be equal to zero. Thus, an increase in vaccinations and temperatures are expected to eliminate the number of deaths from COVID 19 in Greece during the summer months of 2021.

Thank you for
your Attention

