Review of: "Forecasting by Analogy: A Parallel between the Trend of Confirmed COVID-19 Deaths in the Winters of 2022/2023 and 2023/2024 in Italy"

Eduardo Agustín Mendoza[1]

1 Miguel Lillo Foundation (Fundación Miguel Lillo)

The author presents a forecast by analogy of deaths from Covid-19 in two consecutive years for Italy as a novel way of forecasting, as sensitive as deaths are in the field of epidemiology.

In the introduction section, the author states that other prediction methods are known that can surpass the SIR/SEIR methods in prediction length and are simpler. However, he does not offer details of what works he observed. In this sense, there are sensible works that could be mentioned and that can help predict the trend of Covid-19 cases using two consecutive Covid-19 series (Mendoza, et al., 2022).

The author declares that the work is subject to limitations and failures (Which ones?). It would be understood that it is not necessary to go into these details, since all forecasts at some point break.

In the materials and methods section, the author could present a clearer way of writing that offers the reader information in an orderly way to understand the data he used to obtain his results. In this sense, he could send the reader to an external data repository through a link with direct information.

The author in this section states that he only has seven actual values of the number of deaths experienced during the seven-week period from the end of October 2023 to the present day and mentions that he wants to forecast from the present to February 2024. He also declares 2 alternatives, A and B, to conceptualize it as analogies with their differential "suppositions." In relation to this, it is interpreted that in both cases A and B, the author does not justify why the first assumption of A and B ("the length of the Covid-19 wave 2023-24 would have a similar duration to the Covid-19 wave 2022-23") could be true. That is, the great assumption of the work methodology is that the current wave of Covid-19 deaths in 2024 can behave in the same way as the wave of Covid-19 deaths in 2023. This would lead the author to only use route B to obtain his results and correct them for the current trend in both promotions and declines. Furthermore, it is observed that he uses estimates of the trend calculation using averages (why?), and there are two or three more ways to obtain this calculation in time series.

It is suggested to apply the reasoning of the work to test the method at any point in time to correct it for its trend (ascending/descending) only using path B, and since you see a sensible difference in the forecast metric, explore three other ways to calculate the trend that could improve the difference in the final metric.