



Can a 2-Week Lockdown Control a COVID-19 Outbreak? A Cross-Sectional Analysis of the Lebanese COVID-19 Response

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ABSTRACT

INTRODUCTION

With the rise of the novel coronavirus cases and fatalities around the world, researchers were invested in studying not only the therapeutic measures, but also, the preventive ones. As observed in other countries, many governments resorted to the shutdown of all services and closure of all facilities thus isolating people in their homes. Due to the rapidly collapsing local currency and deteriorating Lebanese economy, the local government implemented a two-week lockdown hoping it will reduce the surge in newly diagnosed Corona Virus Disease - 19 (COVID-19) cases without worsening the economic situation.

METHOD

In this study, we aim to understand the effectiveness of such plans in Lebanon and the contribution of the Lebanese people in its accomplishment. We looked at the numbers in all Lebanese territories over 2 weeks before the lockdown, during the 2-week lockdown (from 16 till 28th November 2020) and 2 weeks post lockdown. After collecting the data, we analyzed the mean number of cases and death before, during and after lockdown and by followed the growth factor of cases during this period.

RESULT

It was shown that for all studied districts, there was a trend in decline of the total number of cases, but the results were not statistically significant to prove that a 2-week lockdown can impact the epidemic.

CONCLUSION

A short, partial lockdown has no benefit over the growth or reduction in the virus impact or transmission, however, it might have some positive outcomes if implemented for longer periods.

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SUBMITTED: 18 APRIL 2026

REVISED: 9 MAY 2026

ACCEPTED: 20 MAY 2026

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PUBLISHED BY NEW HEALTH CONCEPT

PANORAMAOEM.CLOUD

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How to cite this paper? El Hussein M, Ait Haddou Mouloud M, Moudoud R, Abdellaoui F, Houmadi B, Hamieh C. Can a 2-Week Lockdown Control a COVID-19 Outbreak? A Cross-Sectional Analysis of the Lebanese COVID-19 Response. Panorama of Emergency Medicine. 2026;4(1) <https://doi.org/10.26738/poem.v4i1.14>

INTRODUCTION

On December 2019, China reported numerous cases of acute respiratory illnesses, recognized later as a novel coronavirus on January 7th, 2020 [1] and it that was added to the coronavirus family including SARS-CoV encountered in China 2003, and MERS-CoV in Saudi Arabia back in 2012 [2]. The World Health Organization (WHO) declared this virus a pandemic on the 11th march, 2020 [3]. Almost every country, district and city of the globe was hit by SARS-CoV-2. Several measures were taken to decrease the spread of this virus, one of which was lockdowns.

A lockdown is a security measure that restricts access of individuals to certain places in order to avoid exposure to a certain hazard; [4] during this worldwide catastrophe the first country to put in place such a strict measure was China, as it closed off Wuhan, the first epicenter of the pandemic, and placed a restricted entry protocol on Huanggang, 30 miles to the east; up to 18 million people were subject to a strict lockdown. [5] However, several countries around the world did not follow these strategies; out of which we can pinpoint Sweden where epidemiologists believed that maintaining social distancing and hygiene measures is as effective as restraining the movement of the population. [6] South Korea, even though harshly hit by the virus, did not impose a lockdown, instead, the country relied on aggressive testing, contact tracing and isolation [6]. South Korea also did not impose a lockdown, instead, the country relied on aggressive testing, contact tracing and isolation [6]. On the contrary some other areas were unable to impose such measures due to the country's poor economy. In an article published on the BBC News, authors talked about the situation in Africa where governments were not able to impose lockdowns on their people, as this would lead the poor into starvation and threaten the supply chain of essential drugs aimed to treat HIV and TB [7].

Lebanon, even though in economic struggle, engaged in lockdown strategies. After the detection of the first case in the country on February 2020 [8], Lebanese government had to enforce different periods of lockdowns and isolating some districts with variable intensity measures, to balance between a spreading disease and a failing economy. On March 15th, 2020, when the number of cases increased to a total of 99, along with an increase in the number of deaths, the government declared a state of medical emergency and imposed a partial lockdown effective from March 18 till 29.

Testing during that period was not based on massive screening, but rather on testing symptomatic patients who present to the hospitals and clinics, and those coming from abroad. Lebanon closed all borders, international flights were temporarily banned, and people were urged to stay home. Schools, universities,

and private commercial businesses were closed, with the exception of some vital sectors such as food services. Banks were also exempted but were forced to operate at a minimum capacity, and a limit of 30% of religious places capacities was imposed to ensure social distancing. Wearing face masks was mandatory in public and private places and transportation services. Afterwards, a progressive release of closing measures was put in place, allowing some facilities to open for few hours per day such as essential shops and supermarkets. People were permitted to move around based on their car plate number. Despite these measures, numbers in Lebanon continued to increase reaching more than 170 in the early days of August, and as Beirut was hit by the Port Explosion of August the 4th 2020, numbers drastically increased, and the situation got out of control [9]. The fight continued until another partial lockdown was imposed on November 16th, 2020. The Airport and border crossings remained open, along with pharmacies and supermarkets. Nationwide, restaurants, pubs and nightclubs remained closed and social gatherings were banned. Travelers were required to provide a negative PCR test at the airport prior to entering the country and take a second test on arrival. The lockdown was eventually relieved abruptly, and the country witnessed several different lockdown strategies afterwards. The government continues to put efforts in controlling the pandemic until relieved by the end of the spread or the establishment of the hoped herd immunity [10, 11].

With large discrepancies in the use of lockdowns among different countries, it was interesting to study the effect of such measures on the progress of the pandemic. An epidemiologic study done in Spain, looked at the number of positive cases, ICU admissions, hospitalizations and mortality trend in the different Spanish cities and followed these trends for a total of 6 weeks of partial lockdown where social distancing measures were strictly adhered to. This study showed that the cities that benefited the most were the ones that implemented early measures as compared to those where mobility was allowed for longer periods before actions were taken, and overall numbers of new cases and hospitalizations decreased [12]. Furthermore, when studying the effects of the lockdown on the pandemic in metropolitan France, researchers found that imposing social measures and enforcing public health rules, decreased the burden of the disease in the cities and in the surrounding regions [13]. In a study analyzing the effect of lockdown strategies on fatality rate in 27 different countries in the world, it was noted that the strict lockdown allowed for a trend toward a non-significant decline in the mortality and incidence rates [14].

As countries experienced different durations of lockdowns, it was interesting to assess the minimal period needed for a significant decrease in COVID-19 incidence, both theoretically and in real life. Lebanon

with all its socioeconomic obstacles since 2019, faced many difficulties in tackling this healthcare crisis. The lack of medical staff, resources, and poor implementation and monitoring of measures made the situation more challenging. During the pandemic, the Lebanese government implemented a 2-week lockdown to cut the rapidly rising incidence of corona virus cases in November 2020. It is consequently important to look at the results of this lockdown in a developing country, undergoing a financial, economic, and humanitarian crises. In this study we observe the outcomes of the 2 weeks' partial lockdown that took place between November 16th 2020 and November 30th, 2020. Is there any benefit of a 2-week lockdown strategy on the incidence of Covid-19 positive cases and the death rate?

MATERIALS & METHODS

METHODS

This is an observational sectional study targeting the period of November 2nd till December 12th, 2020. The analysis is comparable to a study that investigated the impact of 2 weeks of lockdown on COVID-19 prevalence and mortality in 27 different countries, from all continents, when contrasted to 14 days pre-lockdown and 13 days post-lockdown. [14] This study will look at the number of daily cases and deaths from COVID-19, as well as the growth factor for a two-week lockdown, compared to 2 weeks pre- and post-lockdown period in multiple areas in Lebanon. Our own observations are to assess a lockdown of only 2 weeks, that ended abruptly and not gradually.

The analysis will compare the 8 different districts in Lebanon (Beirut, South, North, Akkar, Bekaa, Nabatiyeh, Hermel, Mount Lebanon).

Raw data is extracted as recorded and presented on a daily basis by the Ministry of Public Health in Lebanon (MOPH). Data during the period of the lockdown was also obtained from the ministry of interior (From November 16th till November 30th, 2020). [15] Numbers were collected during 14 days prior to the lockdown, 14 days during lockdown and 14 days after lockdown.

We calculated the daily growth factor for the number of cases and for mortality levels. Growth factor for a certain day is obtained by dividing the number of cases obtained by the number of cases of the day prior. If the resulting value is greater than 1, it would signify an increased prevalence, and if it is less than 1, it would signify a decreased prevalence. The growth factor per day was computed by subtracting the growth factor of a specific day and that of the day prior. A positive value of the growth factor per day signifies an exponential growth of cases, and a negative value signifies a decay in cases. In other words, a negative growth factor means that the epidemic is under control.

STATISTICAL ANALYSIS

The data was analyzed by software SPSS for Windows, version 18 (SPSS Inc., Chicago, IL, USA). Data was presented as mean and standard error of the mean (SEM) for both cases and mortality. Calculations were done for growth factor and for growth factor per day. Difference of means between 3 groups (Pre-lockdown, lockdown, and post-lockdown) for cases in each area and for mortality levels were assessed using analysis of variance for statistical significance. A p-value < 0.05 was considered significant.

Furthermore, ANOVA and Bonferroni test used for post hoc analysis were calculated and results were included in tables below to extract the most out of the collected data

TABLE 1 - Average Number of Cases per day

	Mean (SEM)	Mean (SEM)	Mean (SEM)	
Area	Pre-Lockdown	Lockdown	Post-Lockdown	p-value
Beirut	130.4(8.9)	122.1(11.7)	104(8.6)	0.18
South	122.1(9.7)	97.3(7)	91.1(5.2)	0.016
North	128.9(8.5)	102.9(8.3)	135.6(10.9)	0.039
Akkar	47.9(5.6)	61.2(4.7)	63.8(6.5)	0.11
Bekaa	119.2(11.2)	160.1(15.7)	159.3(16.9)	0.091
Nabatieh	57.1(18.9)	54.1(5.5)	42.7(4.7)	0.13
Hermel	161(11.3)	205.3(21.1)	157(21.5)	0.13
Mount Lebanon	682.7(57.2)	614.4(50)	531.5(30.3)	0.099
Others	178.6(27.3)	118.5(17.1)	105.2(84.9)	0.028
Total	1627.9(100.7)	1535.7(91.2)	1390.2(1205.5)	0.208

RESULTS

Table 1 shows the average number of new cases per day in each district of Lebanon. In the three groups, group 1 to 3, are 2 weeks prior to lockdown, 2 weeks of the lockdown and 2 weeks post lockdown respectively, along the statistical difference between each group per district. **Table 2** represents the mean value of deaths

numbers in the 3 categories for the total districts. Regarding the effect of the lockdown on the number of emerging cases per district and the fatality rate, mainly South and North regions had $p\text{-value} < 0.05$, hence statistically significant.

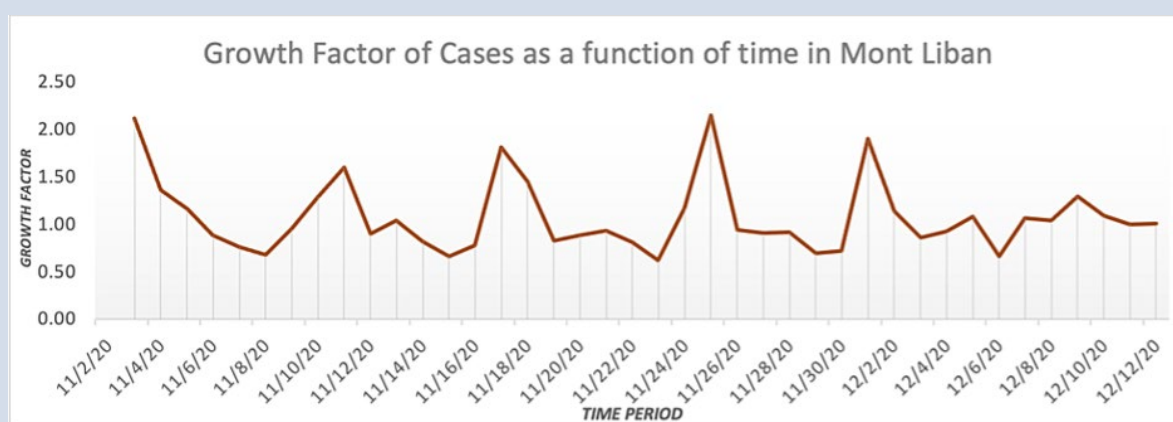
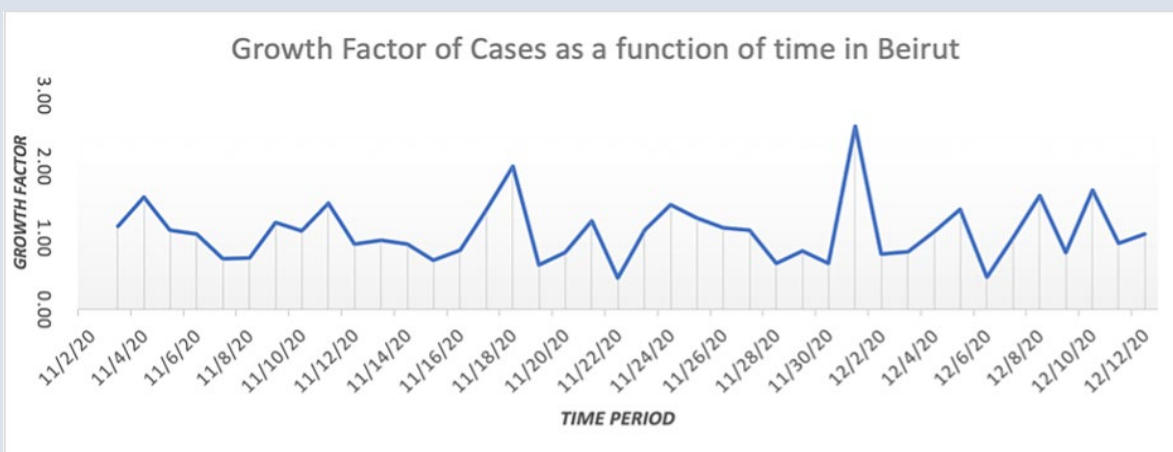
Therefore, no decline in the prevalence number, nor the mortalities caused by COVID-19 in any of the studied districts during or after the lockdown.

TABLE 2 - Mean Value of Death

	Mean (SEM) 1	Mean (SEM) 2	Mean (SEM) 3	
	<i>Pre-Lockdown</i>	<i>Lockdown</i>	<i>Post-Lockdown</i>	<i>p-value</i>
<i>Deaths</i>	12.4(1.1)	13.4(1.4)	14(1.5)	0.7

Furthermore, **Figures 1a, b, c and d** show the growth rate in the number of new Covid-19 cases per day in 3 different districts and in the overall region respectively. **Figure 2** shows the growth rate in the total number of deaths. These figures show that there is a trend to decline in number of cases from one day to the next,

especially in Beirut, Nabatiyeh and Mount Lebanon and in the total region curve; however, the growth factor was always positive for both the new cases and number of death and always greater than 1; thus, a 2-week lockdown had no significant effect on these two variables.



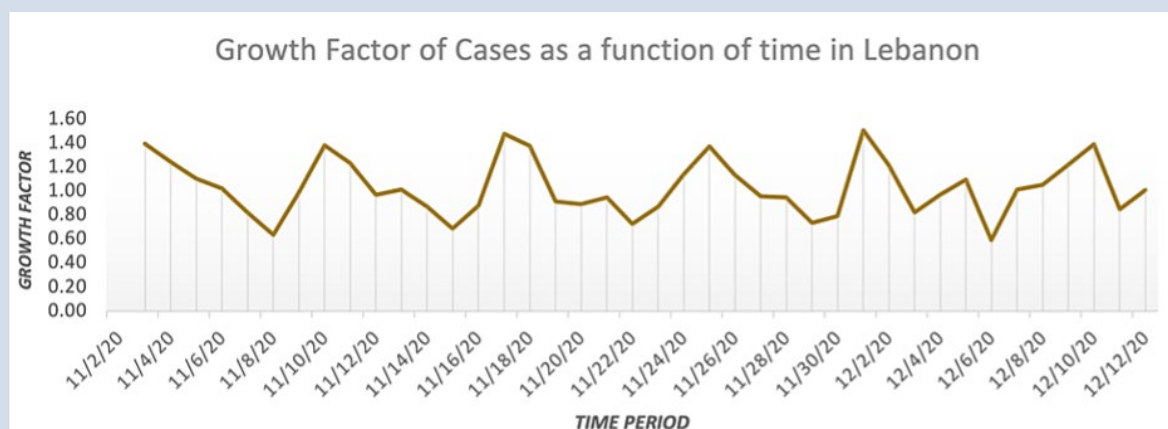
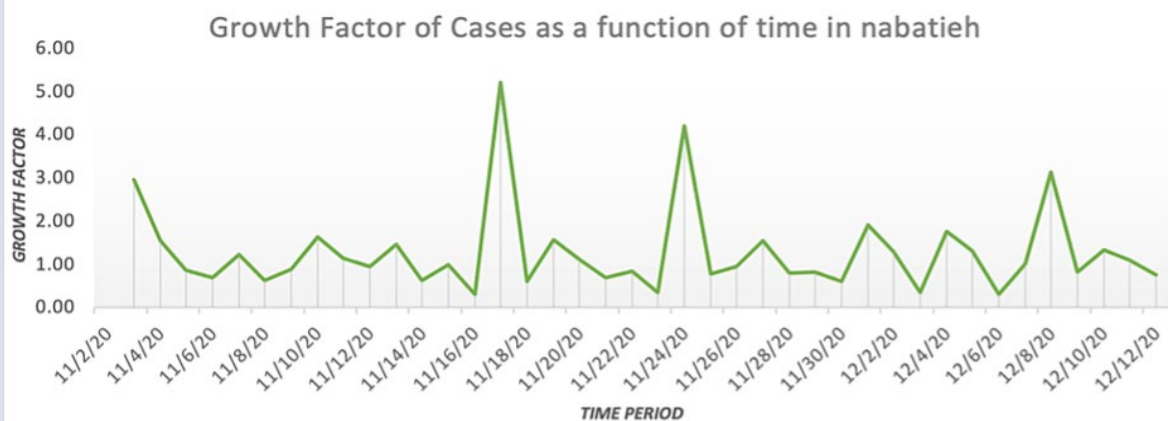


FIGURE 1a.b.c.d - Growth Factor of number of Cases 2 weeks before, 2 weeks during and 2 weeks post lockdown in the following districts respectively, Beirut, Mont Liban, Nabatieh and a total representation.

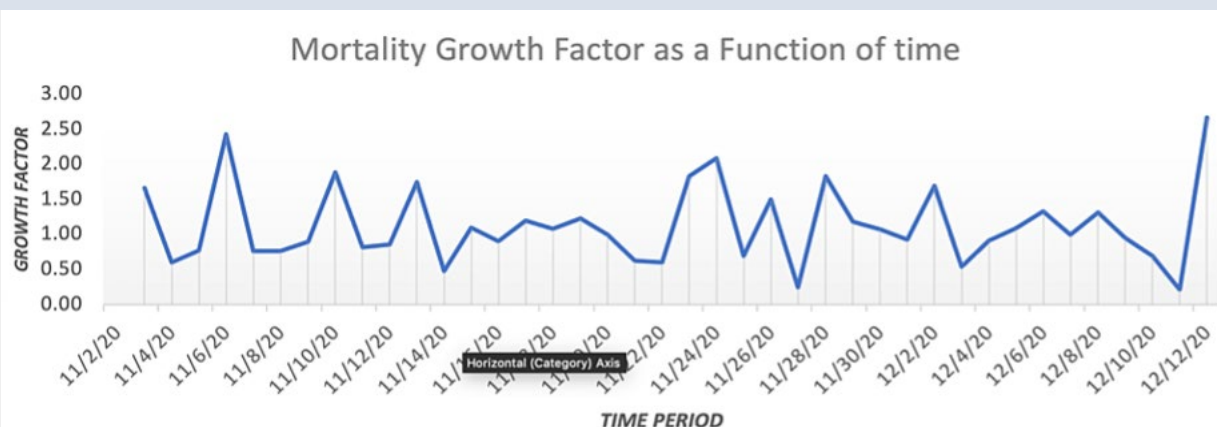


FIGURE 2 - Mortality growth factor as a function of time.

Growth factor of total number of death 2 weeks before, 2 weeks during and 2 weeks post lockdown period.

To add accuracy to our results, we opted to do a post hoc analysis where we divided the data collected into different phases and looked at a 7-day average of new cases per district and that of mortality cases (Table 3 and 4). The periods were: 2-8 November,

9-15 November, 16-22 November, 23-29 November, 30 November-6 December, 7-12 December. Again, no statistical significance was observed between the different phases.

TABLE 3 - 7-day Average of new COVID-19 Cases by Mohafaza

	Mean	SEM	Mean	SEM	Mean	SEM	Mean	SEM	Mean	SEM	Mean	SEM	
Area	Phase 1: 2-8 November		Phase 2: 9-15 November		Phase 3: 16-22 November		Phase 4: 23-29 November		Phase 5: 30 November-6 December		Phase 6: 7-12 December		p-value between groups
Beirut ^a	123.14	14.082	137.71	11.273	127.14	20.344	117.00	13.100	101.86	12.999	106.50	11.946	0.521
South ^a	131.00	16.495	113.14	10.363	93.86	11.515	100.71	8.853	90.14	6.112	92.17	9.421	0.09
North ^a	124.57	11.133	133.14	13.514	107.29	13.880	98.43	9.849	138.43	10.339	132.33	21.432	0.238
Akkar ^a	45.71	10.080	50.00	5.839	59.57	5.331	62.86	8.111	60.43	9.092	67.83	9.874	0.431
Bekaa ^a	108.57	16.021	129.86	15.830	137.29	20.003	182.86	22.202	170.71	23.358	146.00	25.676	0.141
Nabatieh ^a	57.57	8.885	56.57	5.665	56.43	8.810	51.86	7.049	41.57	7.384	44.00	6.202	0.523
Hermel ^a	152.86	18.758	169.14	13.380	197.43	27.148	213.14	34.225	193.86	31.552	114.00	17.748	0.116
Mount Lebanon ^a	693.29	95.139	672.14	71.239	655.14	69.897	573.71	73.545	528.29	49.138	535.17	37.434	0.392
Others ^b	221.86	48.894	135.43	14.632	143.71	30.869	93.29	10.242	94.57	15.295	117.50	8.127	0.015

Average Cases

a No significance after Post hoc analysis

b There is a significant difference between Phase 1 and Phase 4 (p-value= 0.020), and a difference between Phase 1 and Phase 5 (p-value= 0.021).

TABLE 4 - 7-day average of Mortality cases

	Mean	SEM	Mean	SEM	Mean	SEM	Mean	SEM	Mean	SEM	Mean	SEM	
Area	Phase 1: 2-8 November		Phase 2: 9-15 November		Phase 3: 16-22 November		Phase 4: 23-29 November		Phase 5: 30 November-6 December		Phase 6: 7-12 December		p-value between groups
Beirut ^a	11.43	1.378	13.43	1.616	11.86	1.353	14.86	2.502	14.29	1.426	13.67	2.860	0.761

Finally, the percentage of compliance of each district was further studied during the lockdown (Table 5) that showed an average of compliance of 81% in Lebanon; meaning that 81% of the Lebanese were abiding by

safety measures, closing of private and public sectors, closure of food services and luxurious services; only health care facilities were operating along with protective measures.

TABLE 5 - Compliance percentage

Compliance %	Day 1														Day 14
<i>Beirut</i>	94%	82%	90%	81%	80%	85%	85%	83%	82%	82%	80%	81%	83%	88%	NA
<i>South</i>	93%	95%	95%	93%	87%	88%	89%	91%	90%	83%	86%	86%	83%	90%	NA
<i>North</i>	79%	88%	71%	70%	70%	71%	87%	71%	70%	65%	75%	70%	70%	67%	NA
<i>Akkar</i>	68%	83%	81%	83%	85%	70%	70%	70%	70%	65%	70%	65%	70%	56%	NA
<i>Bekaa</i>	85%	83%	NA	81%	80%	82%	80%	81%	71%	70%	73%	81%	75%	81%	NA
<i>Nabatieh</i>	95%	91%	91%	93%	85%	87%	87%	92%	95%	90%	90%	91%	88%	88%	NA
<i>Hermel</i>	75%	75%	75%	75%	85%	85%	80%	75%	71%	70%	65%	65%	50%	40%	NA
<i>Mount Lebanon</i>	91%	93%	91%	90%	90%	91%	85%	89%	85%	85%	87%	87%	88%	87%	NA
<i>Total</i>															
															81%

DISCUSSION

SARS-COV-2 is a global threat especially to the healthcare system. This specific study aimed at assessing the efficacy of an isolated lockdown of 14 days, in reducing the number of daily new cases and the daily mortality secondary to COVID-19 infection. In fact, it is interesting to mention, that out of the 190+ countries affected with COVID, the vast majority chose to close for at least 4 weeks, while the rest implemented a lockdown of 14 days [14,16].

As observed in the results showed above, out of the 8 studied districts, not one displayed statistical decline in the mean number of cases per day, nor in the fatality rate during or after the lockdown as compared to the time before the lockdown. In fact, when looking at charts plotted for the total area or for each area alone, we found that the numbers from one day to the other had a trend to decline, but statistically, growth factor was positive, meaning no true decrease in numbers could be postulated.

Meo et al, also showed that 2 weeks' lockdown has no role in the decrease of cases and all-cause mortalities related to COVID-19 in the 27 studied countries [14]. The lockdowns, therefore, have no direct effect on the evolution of the pandemic. Partial lockdowns, mean continuity in several sectors such as the hospitality sector, the industrial and business sectors, which are all contributors to the increase of numbers of cases per day; this was for example shown in Italy where 0.25 additional daily cases were recorded per 100 worker per square kilometer during a partial lockdown [17]. Short lockdowns of 2 weeks durations don't give enough time for the restrictive measures to work or at least to be reflected by numbers. In fact, a study published in JAMA internal medicine showed that it took asymptomatic patients, 17 days after their

diagnosis to have negative PCRs, and 19 to 20 days for the symptomatic ones, which is longer than the duration of the lockdown in question [17].

Furthermore, one of the limitations of their study, was the inability to account for the compliance of the populations to the safety measures and restrictive rules. In our study, we were able to account for this factor. The average adherence to lockdown rules, as documented by the 'Lebanese National Operations Room' was 81% for all regions and for a period of 14 days. This shows that even with a good level of compliance, a 14-day lockdown will not control the epidemic. Another limitation is their random selection of a 2-week lockdown period in countries who were subject to longer lockdown periods, whereas ours looked at the full period imposed by the government which was 2 weeks.

It is important to highlight the role of the lockdown in alleviating the burden on the healthcare system. Hospitals benefit from lockdown periods, where influx of patients to the emergency departments and clinics decrease, to increase their regular and intensive unit capacities and to gain access to more resources. WHO affirmed that since September 2020, the number of ICU beds in Beirut has doubled from 162 to 364 bed [18].

Lockdowns might not be the ultimate solution for the epidemic, but it has helped the expansion of the hospitals' capacities and it has also helped in the decrease of air pollution, in Lebanon and globally. [19]

It is also interesting during these times to observe the trend of flu and common cold. Several physicians noticed a decrease in these cases in their clinics, just like 71 countries in the northern hemispheres have reported [20]. Whether this is related to the patients being isolated and wearing masks or seeking less medical care is controversial.

STRENGTH AND LIMITATIONS

Lebanon, the small Mediterranean country, was between the highest 20 countries in number of cases of COVID-19 per day per capita, and it has been under several different lockdown strategies; [21] therefore, it is very important to shed the light on the negative impact of lockdowns so that Lebanon and countries with similar situation work on different strategies to decrease the spread of the virus. The study collected data from official reliable Lebanese governmental resources and analyzed them via using metrics specific for the evaluation of a pandemic growth. It was also capable of measuring adherence, to identify the role the people play in this scenario; it is however essential to mention that data about compliance is an approximation to what was observed in the country. The study timeline is however limited to 2 weeks post lockdown, which is the average incubation period of the disease; but longer observation could have shown other results; also, the lockdown in question was a partial one, a comparison between partial and total longer lockdown is needed to confirm our observation.

CONCLUSIONS

In conclusion, as witnessed in different countries and cities of the world, social distancing and 2-week lockdowns, was not able to affect the curves of COVID-19 new cases and death in Lebanon, regardless of the population adherence. We recommend a longer duration of restrictions or implementation of other strategies, at least while the vaccination process in the country is ameliorated. Lockdowns, whether for short or long period, are not out of benefit as they allow the healthcare systems to be more prepared.

KEYWORDS

COVID-19; LOCKDOWN; PUBLIC HEALTH POLICY; EPIDEMIOLOGY; GROWTH FACTOR; LEBANON

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AUTHOR CONTRIBUTIONS

All authors contributed equally and validated the final version of record.

DECLARATIONS

CONFLICTS OF INTERESTS

The Author declares that there is no conflict of interest.

FUNDING

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

REGISTRATION

No registration applicable.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICAL APPROVAL

This study used publicly available anonymized data and did not require ethical approval.

REFERENCES

1. WHO announces COVID-19 outbreak a pandemic. Euro.who.int. 2021,
2. AlMandari A, Samhouri D, Abubakkar A, Brennan R: Coronavirus Disease. 2019/2021. https://www.researchgate.net/publication/339444375_Coronavirus_Disease_2019_outbreak_preparedness_and_readiness_of_co....
3. Organization W: Novel Coronavirus (2019-nCoV): situation report, 1. Apps.who.int. 2021.
4. (2021). <https://www.merriam-webster.com/dictionary/lockdown>
5. Staff A. A Timeline of COVID-19 Developments in. (2020/2021). <https://www.ajmc.com/view/a-timeline-of-covid19-developments-in-2020>
6. Explained: These are the countries that have not imposed lockdowns. The Indian Express. (2021). <https://indianexpress.com/article/explained/explained-the-countries-that-have-not-imposed-lockdown-and-why-6389003/BBC>
7. News - Africa . (n.d.). African Studies Companion Online. 10.1163/1872-9037_afco_asc_852
8. Staff R: Lebanon confirms first case of coronavirus, two more suspected. U.S. 2021,
9. Souaiby N, El-Hussein M: Beirut Explosion, the full story. Mjemonline.com. 2021.
10. Lebanon to Reinstate Total Lockdown Amid Spike in Infections. Voice of America. (2021). <https://www.voanews.com/covid-19-pandemic/lebanon-reinstate-total-lockdown-amid-spike-infections>
11. Lebanon: Nationwide lockdown to be imposed November 14-30 / update 35. GardaWorld. (2021). <https://www.garda.com/crisis24/news-alerts/398291/lebanon-nationwide-lockdown-to-be-imposed-november-14-30-update-35>
12. Siqueira C, Freitas Y, Cancela M, Carvalho M, Oliveras-Fabregas A, de Souza D: The effect of lockdown on the outcomes of COVID-19 in Spain: An ecological study. 2021, S. Kiem, C. Paieau, J. Rolland, P. Fontanet, A.:
13. Thelancet.com. (2021). <https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-673632034-1.pdf>
14. Meo S, Abukhalaf A, Alomar A, AlMutairi F, Usmani A, Klonoff D: Impact of lockdown on COVID-19 prevalence and mortality during. 2020, 27:2021.
15. إدارة مخاطر الكوارث - الأخبار. Drm.pcm.gov.lb. 2021,

16. Ryan, J. M. (2020: **The SARS-CoV-2 virus and the COVID-19 pandemic. Available from : The SARS-CoV-2 virus and the COVID-19 pandemic | Taylor & Francis Group.**
17. Edoardo Di Porto & Paolo Naticchioni & Vincenzo Scrutinio: 2020, 19:569.
18. Health officials are racing to boost ICU capacity as Lebanon enters a new coronavirus lockdown. L'Orient Today. (2021272021). <https://today.lorientlejour.com/article/1240626/health-officials-are-racing-to-boost-icu-capacity-as-lebanon-enters-a....>
19. COVID-19 lockdowns significantly impacting global air quality. ScienceDaily. (2021272021). <https://www.sciencedaily.com/releases/2020/05/200511124444.htm>
20. How coronavirus lockdowns stopped flu in its tracks. Nature.com. (2021272021). <https://www.nature.com/articles/d41586-020-01538-8>.
21. Coronavirus Update (Live): 127,222,536 Cases and 2,788,046 Deaths from COVID-19 Virus Pandemic - Worldometer. Worldometers.info. (2021272021). <https://covid19.who.int>