

110-1 國立臺灣大學 時空資料視覺化 學期報告計畫書
2021-Fall NTU Spatiotemporal Data Visualization Term Project Proposal
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1. Title :

Spatial Patterns of suicide rate change after the outbreak of COVID-19 in Japan

2. Literature Review :

It has been reported that COVID-19 influenced human's mental condition via a variety of aspect including fear of being infected, loneliness during self-quarantine and so on. In Japan, it has been reported that there were excessive suicide rate than the stable condition before the virus outbreak (Tanaka, T., Okamoto, S., 2021). However, the spatial pattern of COVID-19 induced suicide rate change wasn't been discussed. Accordingly, I am going to discuss the spatial pattern of suicide rate change in the 5 waves of COVID-19 outbreak in Japan.

3. Research Questions :

1. Do suicide rates change after COVID-19 in Japan occur in clusters ?
2. Where do the suicide rates cluster ?

4. Data:

4-1. Suicide Data :

- Source :Ministry of Health, Labour, and Welfare, Japan. Website :
<https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/0000140901.html>
- Space resolution : Prefectures(47) / Municipals(1,724)
- Time resolution : Month
- COVID-19 Period : 2020/Feb-2021/Oct. (5 waves of COVID-19 outbreak)

4-2. COVID-19 infected Data (Optional):

- Prefecture – level data: NHK. Website :
<https://www3.nhk.or.jp/news/special/coronavirus/data/>
- Municipals – level data : Scatter in each Prefectures' Websites.

5. Expected Results :

Expected result is an online interactive dashboard that users can choose different waves of outbreak of COVID-19 can investigate the spatial pattern of suicide rate change. The suicide rate change is calculated with the concept that the suicide rates after COVID-19 minus ones before COVID-19. Hopefully, If everything go well, I would like to generate the animation of spatial pattern with monthly change.

6. Reference:

Tanaka, T., Okamoto, S. Increase in suicide following an initial decline during the COVID-19 pandemic in Japan. Nat Hum Behav 5, 229–238 (2021).
<https://doi.org/10.1038/s41562-020-01042-z>