# Insights Extraction

## Main Questions

1. What is the trend? What can we tell from it?
2. Why did the trend occur? Is it possible to infer from data? – where relevant

## Insights

Generally, we observe that frequency of post relevant to mental health have increased significantly with covid, as seen from the upwards trend in *figure 1*. From *figure 2*, post frequency peaked in second quarter of the year for both 2020 and 2021, during April and May respectively.

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Figure Overall Reddit Post Frequency against Time Figure Monthly Reddit Post Frequency

Interestingly, these peaks align with the drastically increasing new community cases each week in April 2020 and May 2021, as shown in *figure 3*. That said, such similarity only suggest correlation not causation, but it hints that the covid situation is influential on redditors’ behaviors and mental state.

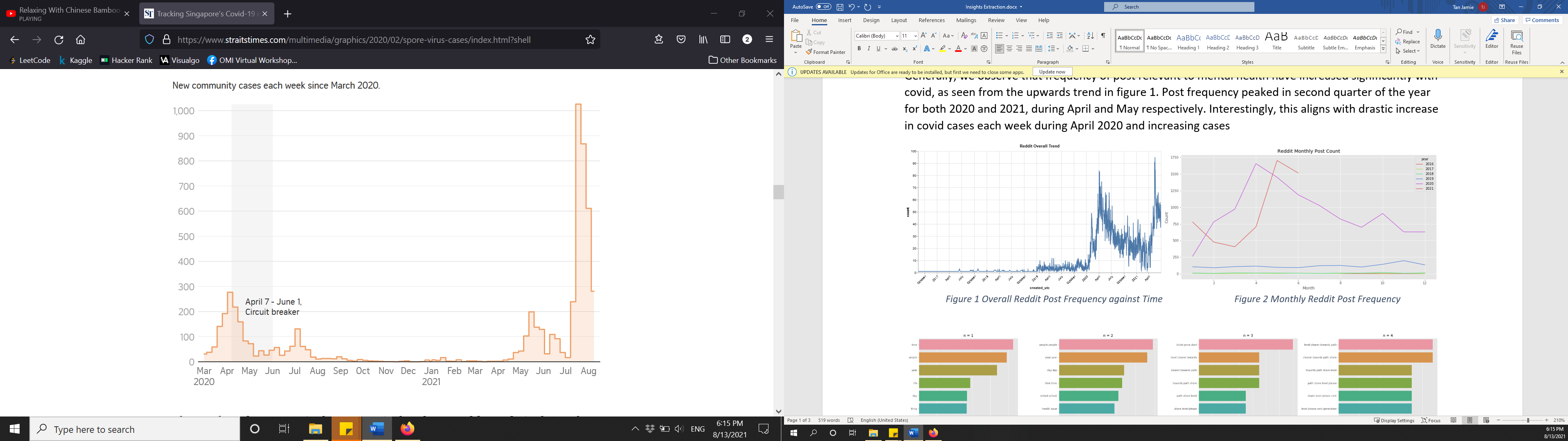


Figure New community cases each week since March 2020 (source: [Straits Times](https://www.straitstimes.com/multimedia/graphics/2020/02/spore-virus-cases/index.html?shell))

Borrowing *figure 1* illustrating *frequency of post against time*, the number of relevant posts in mid-covid is significantly larger than pre-covid period. It is thus no surprise that the values on axes of ngrams representing mid-covid *(figure 5)* timeframe are of greater order.

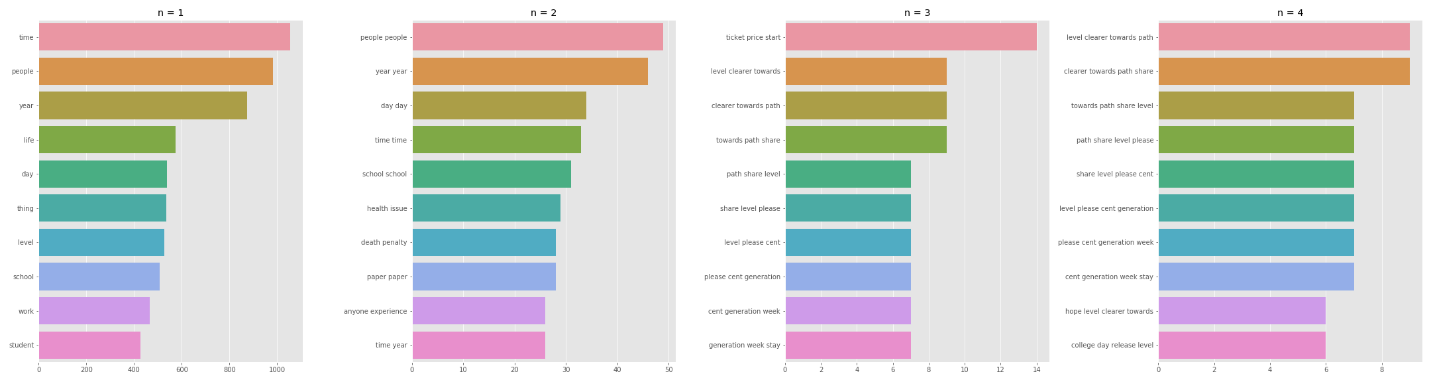


Figure Pre-covid Ngrams

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Figure Mid-covid Ngrams

In general, pre and mid covid *1-gram* are similar. However, some addition to the list of topics discussed during the pandemic includes “covid” and “help”. The frequency of “school”, “student” and “work” also increased during covid. – (1)

Unsurprisingly, covid-19 is highly discussed in Reddit, as inferred from “circuit breaker”, “covid case” and “community case” in *figure 5 2-gram*. Furthermore, covid may have catalyzed more exchange within the community, as inferred from the addition of “share experience”. “Part time” also entered the top-10 used phrase as depicted in *figure 5 2-gram* and “part time job” in *figure 5 3-gram*. – (2)

Lastly, *4-gram* for mid-covid period is contain terms mostly related to examination, which is a stark contrast to that of pre-covid. –(3)

Chart

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Figure Overall Reddit Sentiment across Time Figure Word Cloud for Respective Sentiment

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## Word Cloud: Main topics in word cloud

|  |  |  |
| --- | --- | --- |
| **School related subreddits** | **Precovid keywords** | **Midcovid keywords** |
| NTU | Vibration, course, work, result, health, scheme | Student, time, hall, year, anyone, help |
| NUS | Engineering, student, wondering, study, experience | Student, time, year, module, people, friend, help, anyone, zoom |
| SingaporePoly | Help, ask, nobody, plea, please | Student, course, poly, year, take, point |
| SMU\_Singapore | Not representative, only one remaining post after cleaning. | |
| SGExams | Level, time, year, school, paper, people, course, student | School, time, year, level, student, friend, study, course |
| **General subreddits** | **Precovid keywords** | **Midcovid keywords** |
| Singapore | People, time, think, life, year, help, want | Covid, people, time, case |
| Singaporefi | Rolling, return, year, analysis, period | Fee, year, fund, option, stock, market, account |
| SingaporeRaw | Death, abuse, case, car, fight | People, day, time, case, covid |
| askSingapore | Year, time, work, owner, day, job | Time, people, year, help, work, job |
| NationalServiceS | Time, year, day, account, help, bank, anxiety | Time, day, help, month, year, unit |
| MentalHealthSG |  | Help, time, year, health, think, anyone |

Chart, line chart

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