Supplementary Table 1 News outlet used for COVID-19 related post collection

|  |  |  |
| --- | --- | --- |
| Name of social media | Type of news | Number of followers（million） |
| People's Daily | Main outlets releasing official information and notification from governmental authorities | 115.88 |
| CCTV News | 108.62 |
| Healthy China | 5.61 |
| XinHua | 91.72 |
| ThePaper.cn | Main outlets releasing domestic and international epidemic-related news with top public interest | 22.48 |
| Headline News | 77.58 |
| Beijing news | 41.07 |
| Global Times | 27.28 |
| DingXiang Yuan | Chinese medical websites that provide relevant information on COVID-19 from the Chinese healthcare community | 2.04 |
| DingXiang Doctor | 5.13 |

Supplementary Table 2 Classification of emoji that available in Weibo

|  |  |  |
| --- | --- | --- |
| Classification | | Invovled emoji |
| Negative emotions | Anger |  |
| Sadness |  |
| Mixed/ unclear emotions | |  |
| Neutrality | |  |
| Others | |  |
| Positive emotions | |  |

Supplementary Table 3 Differences in mobility patterns between COVID-19 outbreak period and the same period of the previous lunar calendar year

|  |  |  |  |
| --- | --- | --- | --- |
| Mobility pattern (by activity range) | 2019\*  Mean(95%CI), % | 2020  Mean(95%CI), % | Difference(95%CI),  % |
| 0m-500m | 44.91 (44.61-45.21) | 58.56 (56.85-60.27） | 13.65 (11.87-15.43） |
| 500m-1km | 9.19 (9.04-9.33） | 7.38 (7.25-7.52） | -1.80 (-2.02- -1.59） |
| 1km-5km | 24.33 (24.19-24.47） | 18.92 (18.32-19.53） | -5.41 (-6.00- -4.81） |
| 5km-10km | 8.10 (8.01-8.19） | 6.12 (5.82-6.42） | -1.98 (-2.31- -1.65） |
| 10km-100km | 11.34 (11.09-11.59） | 7.66 (7.06-8.26） | -3.68 (-4.37- -3.00） |
| More than 100km | 2.20 (2.09-2.30） | 1.21 (1.09-1.33） | -0.99 (-1.18--0.80） |

\* The same period of the previous lunar calendar year