An Analysis by State on The Effect of Movement Control Order (MCO) 3.0 Due to COVID-19 on Malaysians' Mental Health: Evidence from Google Trends

ABSTRACT

Due to significant social and economic upheavals brought on by the COVID-19 pandemic, there is a great deal of psychological pain. Google Trends data have been seen as a corollary measure to assess population-wide trends via observing trends in search results. Judicious analysis of Google Trends data can have both analytical and predictive capacities. This study aimed to compare nationwide and inter-state trends in mental health before and after the Malaysian Movement Control Order 3.0 (MCO 3.0) commencing 12 May 2021. This was through assessment of two terms, "stress" and "sleep" in both the Malay and English language. Google Trends daily data between March 6 and 31 May in both 2019 and 2021 was obtained, and both series were re-scaled to be comparable. Searches before and after MCO 3.0 in 2021 were compared to searches before and after the same date in 2019. This was carried out using the differences in difference (DiD) method. This ensured that seasonal variations between states were not the source of our findings. We found that DiD estimates, _3 for "sleep" and "stress" were not significantly different from zero, implying that MCO 3.0 had no effect on psychological distress in all states. Johor was the only state where the DiD estimates _3 were significantly different from zero for the search topic 'Tidur'. For the topic 'Tekanan', there were two states with significant DiD estimates, _3, namely Penang and Sarawak. This study hence demonstrates that there are particular state-level differences in Google Trend search terms, which gives an indicator as to states to prioritise interventions and increase surveillance for mental health. In conclusion, Google Trends is a powerful tool to examine larger population-based trends especially in monitoring public health parameters such as population-level psychological distress, which can facilitate interventions.