Background: COVID-19 has shown varying impacts on different populations. In the Western Pacific (WP) Region with a relatively low COVID-19 burden, the variabilities of its impact on mental health, wellbeing and preventive behaviors across countries are unclear.

Methods: We analyzed repeated national-representative, cross-sectional data of 87,787 adults collected via the Imperial College London YouGov COVID-19 behavior tracker in ten WP countries—Australia, China, Singapore, Japan, South Korea, Vietnam, Taiwan, the Philippines, Malaysia and Hong Kong during the pandemic (April-September 2020). Main outcomes were severe depression/anxiety (Patient Health Questionnaire-4 score ≥9), wellbeing (Cantril Ladder Scale 0-10), worries of contracting COVID-19 and prevalence of preventive behaviors. Monthly temporal trends were examined.

Results: Percentages of severe depression/anxiety were higher in Australia (12.9%), Hong Kong (11.8%) and lowest in Vietnam (6.8%); increasing trends were noted in the Philippines (5.9% to 12.3%, p < 0.0001) and Malaysia (8.2% to 10.7%, p = 0.019). South Korea, China and Taiwan had the lowest levels of wellbeing (5.0-5.5) compared with their highest counterparts in the Philippines, Australia and Vietnam (6.2-6.5). Worries of COVID-19 remained high in Asia countries (Japan, South Korea, Malaysia, Vietnam and the Philippines: 79.2%-81.6%), compared to that in Australia (41%). 83.5%-
97.2% of the Asian respondents persistently wore face masks outside home, while the mean percentages were low in Australia (32.2%) despite the increasing trend observed (24.1% to 48.6%, p < 0.000). Over half of the WP countries have significant decreasing trends (p < 0.000) for avoid going out; Taiwan showed the lowest prevalence (45.7%).

Conclusions:
Psychological and behavioral responses to COVID-19 in the WP region varied widely. COVID-19-related negative impact on mental health and wellbeing was universal. A Global effort to tackle the aftermath of the pandemic is crucial.

Key messages:
- The psychological and behavioral responses to COVID-19 in Western Pacific countries varied widely.
- Severe depression/anxiety and low levels of wellbeing were prevalent in Western Pacific Region.