EI-COV20-027 - SARS CoV-2: Mental Health in Österreich

Abstract

We used psychological surveys and social media data in order to assess aspects of mental health during the pandemic in Austria. Using a survey in 12 waves between April and December 2020, with approximately 1,000 participants per wave, we assessed depressive symptoms, anxiety, suicidality, and domestic violence. Survey participants were representative of the Austrian population in terms of age, gender, education, and federal state of residence. Overall, the level of psychological burden was high: 21.8% of participants reported moderate to severe depressive symptoms, 18.9% anxiety, 7% suicidal thoughts, and 18.9% domestic violence. Particularly young people up to 29 years, individuals with low household income, pre-exiting mental health problems, with occupational risk of exposure to Covid-19 (particularly healthcare professionals), but also individuals in home-office and those with Covid-19 illness showed worse mental health as compared to other participants. Depressive symptoms showed an increase during the second hard lockdown whereas suicidality remained relatively constant and reached a low during the second lockdown. Domestic violence increased immediately after the first lockdown remained elevated over subsequent assessments, with a further immediate increase after the second hard lockdown. These patterns overall have several implications: first, mental health indicators highlight the large psychological burden in the population during the pandemic. Second, so far, this has not translated into increases in suicide (which declined by 4% in the year 2020) or suicidal ideation, most likely due to psychosocial and economic labour market measures which have been shown to be effective to combat suicide. Third, new risk groups for mental ill-health have emerged during this pandemic. Fourth, not all indicators of mental health show the same patterns over time. Fifth, long-term psychosocial support and labour market measures will be necessary to help vulnerable groups to cope with mental health consequences of the pandemic and to mitigate the risk of increases of suicides in the future.

The social media analysis explored if and how social media data could contribute to managing public health crises like COVID-19. The basic idea is that analysing the text of publicly available postings on social media could help to recognize mental health problems in the population, or help public communicators to better connect with the public by taking their emotional state into account. For this to work, we need to find out which parts of the population are represented on which social media platforms, and which analyses produce indicators that correspond to people's actual mental health. To contribute to this, we collected usage statistics for social in Austria, and tested different methods of analysing emotion in text. For this, we correlated data from two online platforms, the online forum of DerStandard and Twitter, with answers of participants in the survey. We first explored measures based on counts of emotional words that correspond to survey answers on anxiety, depression, anger and suicidal thoughts, or that could be related to negative experiences like domestic violence and conflicts. We also compared such word count measures for negative emotions with a measure based on machine learning. Data from both platforms and both methods mostly followed a similar pattern, but did not clearly correlate with people's survey responses. Based on our results, we suggest ways of improving the available methods to make more valid predictions about mental health from social media data, and of collecting survey data suited for testing their validity.

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