Infodemia and COVID-19: a text mining analysis

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Introduction:
Covid-19 epidemic lead a huge use of social media to comment and spread information from the widest sources. Infodemia looks at excessive amount of information circulating, which makes it difficult to orientate communities on a given topic due to the difficulty of identifying reliable sources. Using text mining analysis it is possible to identify what drives public conversation and impact of Covid-19.
Methods:
Public perceptions in emergencies is traditionally measured with surveys. However, to have a global sight of the pandemia, Twitter represents a powerful tool which gives real-time monitoring of public perception. The study aimed to: 1) monitor the use of the terms “Covid-19” or “Coronavirus” over time; and 2) to conduct a specific text and sentiment analysis.

Results:
Between January 10 and May 8, 2020, over 600 million tweets were retrieved. Of those 600,000 tweets were randomly selected, coded, and analyzed. About 10% of cases were identified as misinformation. Public figures, experts in public health, and virologists represent the most popular sources in comparison to the official government and health agencies. There is a positive correlation between Twitter activity peaks and COVID-19 infection peaks. Text mining analysis was carried out, as well as a content analysis, also in order to identify changing emotions and sentiments during time. This analysis, particularly during the lockdown, clearly shows that participation on social media can potentially have an effect on building social capital and social support.

Conclusions:
This study confirms that using social media to conduct infodemic studies is an important area of development in public health arena. COVID-19 tweets were primarily used to disseminate information from credible sources, but were also a source of opinions, emotion and experiences. Tweets can be used for real-time content analysis and knowledge translation research, allowing health authorities to respond to public concerns.

Key messages:
- Social media is crucial for health information.
- Infodemia as new way for study health.