Public sentiment analysis, emotion detection and topic modelling on YouTube regarding Generational End Game (GEG) law

Soelar Shahrul Aiman, Ahmad Faizah, Ismail Ibtisam

Clinical Research Centre, Hospital Sultanah Bahiyah

ABSTRACT

Introduction: The anti-smoking laws for the first time have been proposed in the Parliament of Malaysia on 27th July 2022. The anti-smoking laws or referred to as the Generational End Game (GEG) law, will ban anyone who was born after 2007 from buying tobacco. Therefore, this study performed sentiment analysis, emotion detection, and topic modelling on textual data from YouTube comments regarding the GEG law. **Methods:** We searched for the term "GEG" or "generational end game", with a timeline limited to the period between August 1st to 21st, 2022, and collected 1305 YouTube comments. We performed data pre-processing on YouTube comments using R software version 4.2.1. Calculation of the sentiment analysis and detection of the emotion in the data was performed using the syuzhet package and National Research Council (NRC) Emotion Lexicon, respectively. Finally, this study further investigates by identifying the topics using the Louvain method. **Results:** In total, 1281 comments and 14958 words were selected for the data analysis. The sentiment analysis regarding GEG law in YouTube comments is mostly negative (56.9%), followed by positive (33.3%) and neutral (9.8%). The emotion analysis indicates that fear is the most present emotion, followed by trust and sadness. Our analysis identified five topics, almost half of the word associations regarding GEG law were related to the "Propose to take action against the use of vape and close the factory" topic (48.6%). **Conclusion:** Our findings may help the government to identify and understand netizens (network citizens) sentiments, emotions, and topics.