What Malaysians Tweeted about COVID-19? An Exploratory Study

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NMRR-20-605-54414

INTRODUCTION

❖ Exploring phenomenological experiences "now" during pandemic times facilitate timely construction of risk-communication framework for pubic health interventions.

❖ We aimed to explore public perceptions and reactions towards the COVID-19 pandemic in Malaysia via thematic-content analyses using Twitter.

METHODOLOGY

Access to Twitter Developers API Platform

Pulling of Real-Time Tweets via R Studio Environment (Package twitteR)
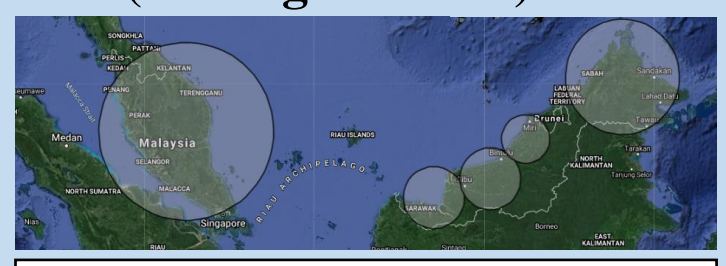
Twitter users identification limited to 5 geographical centroids across Malaysia via circular radius

Tweets Retrieval and Filtering Process

42028 tweets retrieved between 10th till 25th May 2020 using keywords *COVID-19, Coronavirus, SARS-CoV-2, 2019nCoV*
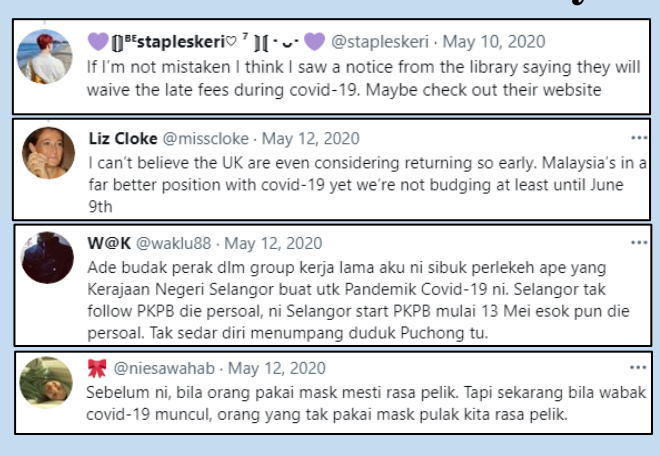
23,426 tweets removed:
• Similar tweets (5237)
• Non-English/Malay tweets (1971)
• Tweets not related to Malaysia (15104)
• URL tweets only (1114)

18602 tweets for analysis

Text Pre-Processing
- Removal of Numbers
- Filtering of Stopwords
- Removal of URLs
- Removal of Special Characters

Thematic-Content Analysis

Text Processing

Word Cloud Analysis

Favorite Count Ratios Analysis

RESULTS

Figure: Word Cloud Analysis

Table: Thematic-Content Analysis

Major Themes	Personal Experiences	Risk Perceptions	Expressions & Reactions
Favorite Ratios	17.18	14.97	12.82
Sub Themes	**1. Direct** "Whenever you step out of the house, you feel like Coronavirus is watching you. The fear is real." **2. Indirect** "My brother has been suspected for covid 19. Hope recover soon."	**1. Seriousness of infectivity** "It's sad to see lots of companies are being affected during Covid-19" **2. Downplayed risk** "No no no, everyone knows that Covid-19 is caused by 5G!"	**1. Relief** "It's been a week that sarawak has no new record for positive case of covid-19!" **2. Frustrations** "When you ready for raya but Covid-19 made other plans" **3. Hope** "All we can do is pray for freedom from Covid-19" **4. Appreciation** "Every thought counts! Send your appreciation to our dedicated frontlines" **5. Appeal** "Keeping each other safe is everyone's responsibility."

DISCUSSION

❖ The generated cloud during pandemics revealed that Malaysian tweets had the highest weightage on general information about *"cases,"* and updates about the *"virus," "outbreak,"* and *"control measures,"* consistent with the findings from UK.[1]

❖ People's emotions and sentiments were mixed. *"Personal experiences"* had the highest favorite ratio that identified *self-own (direct)* and *other people's (indirect)* experiences of being infected with COVID-19.

❖ Some tweets expressed *"seriousness of infectivity"* while some *"downplayed the risks!"* These circumstances showed people's mixed emotions and reactions towards the pandemic; either they were being *"relieved," "frustrated," "having new hopes," "appreciated others,"* or had an *"appeal to others."*

CONCLUSION

In unexpected times, people's conversation change, evolve, and becomes flux overtime. The understanding of real-time public conversations in early days of crises and beyond may signal caution for public health advocates to craft appropriate risk-communication framework and strategies.

REFERENCES
1. Karmegam D, Mapillairaju B. What people share about the COVID-19 outbreak on Twitter? An exploratory analysis *BMJ Health & Care Informatics* 2020; 27:e100133.