Publication Dynamics on Social Media During the Orpea Nursing Homes Scandal: A Twitter Analysis.

Mathilde Fruchart, Laetitia Verdier, Jean-Baptiste Beuscart, Antoine Lamer

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Mathilde FRUCHART[a,1], Laetitia VERDIER[b], Jean-Baptiste BEUSCART[a,b] and
Antoine LAMER[a,c]

[a] *Univ. Lille, CHU Lille, ULR 2694 - METRICS: Évaluation des Technologies de santé et des Pratiques médicales, F-59000 Lille, France*
[b] *CHU Lille, Department of Geriatrics, F-59000 Lille, France*
[c] *F2RSM Psy - Fédération régionale de recherche en psychiatrie et santé mentale Hauts-de-France, F-59350, Saint-André-Lez-Lille, France*

Abstract. The release of a book denouncing mistreatment in French nursing home triggered a scandal which was conveyed on social networks. The objectives of this study were to study the temporal trends and dynamics of publication on Twitter during the scandal as well as to identify the main topics of discussion. The first one is spontaneous and completely aligned with the actuality and fed by media and family of residents, while the second one is out of step with current events and fed by the company involved in the scandal.

Keywords. social media, nursing home, Twitter, topic modeling, orpea, data reuse

1. Introduction

The scandal began on January 24th 2022, with the publication of a book-investigation written by the French journalist Victor Castanet. The book, untitled "Les Fossoyeurs", revealed mistreats on elderly housed in nursing homes [1]. This scandal has provoked a political movement which denounced other nursing home groups (Korian). Social media are web based tools enable the sharing of contents. Information found in the social media may help to set up infoveillance and tracks epidemics [2, 3]. The objectives of this study were to study the temporal trends and dynamics of publication during the Orpea scandal as well as to identify the main topics of discussion on Twitter.

2. Methods

In a first step, we observed tweets related to Orpea's scandal and we defined a lexical field referring to the scandal on Twitter as followed: "#orpeagate", "ehpad and cash investigation" (ehpad is a French acronym for nursing home), "korian", "victor castanet", "lesFossoyeurs", "laurent garcia". In a second step, we used the Tweepy library to extract

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[1] Corresponding Author: Mathilde Fruchart, ULR 2694, Lille University, 2 place de Verdun, F-59000, Lille, France; E-mail: mathilde.fruchart@univ-lille.fr.

tweets including the lexical field previously defined. The extraction of tweets was done in July 2022 and covers a period of one year (from June 1st, 2021 to June 1st,2022). We applied natural language processing methods to remove duplicated tweets as well as the URLs and stopwords found in the text. We described the frequency of tweets with a timeline. We performed a topic modeling based on the unsupervised probabilistic Latent Dirichlet Allocation model (LDA). We used the Python libraries Gensim to perform topic modeling and pyLDAvis to visualize the clusters and the keywords for each topics [4]. Finally, we have extracted the posts from the Twitter account @Orpea_. The activity of the account was described by the number of posts published.

3. Results

We extracted 85,342 unique tweets related to the scandal. The main spikes concerns 10,076 tweets for the publication of "Les Fossoyeurs", 12,466 tweets for the investigation carried out by the French authorities (IGAS-IGF) and 4,494 tweets for the Cash Investigation program. Most tweets were posted between 6am and 12pm (n = 22,662, 26%).We identified 6 clusters of tweets. We manually assigned a label to each cluster. We identified 389 tweets published by the @Orpea_ account between September 2019 and November 2022. The strongest activity of the Orpea account occurred in June 2022 with 15 tweets on 01-06-2022. Conversely, there is a lack of activity on the dates of the scandal.

4. Discussion and Conclusion

The first pattern of publication on the social media is very spontaneous and aligned with actuality, with events such as (in chronological order) the release of the book "Les Fossoyeurs", the beginning of the investigation by a French authority, the senate audition of the author of the book, the TV program dedicated to another nursing home company and the complaints submitted by the state and the families of the residents. Conversely, the second pattern involved the company. It had little or no activity during the period of the scandal and did not reply to any posts. Six topics of discussion emerged: the French nursing home system, politics in general, but also denunciations of mistreatment in nursing homes, the feelings of residents' relatives, the scandal itself and the repercussions of the Orpea scandal on the other nursing home company Korian.

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