

Article

Using Social Media Listening in Crisis Communication and Management: New Methods and Practices for Looking into Crises

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Abstract: The paper aims to explore new methods and practices for looking into crises in online environments by using social media listening tools and methods. Based on the case of two privately owned hospitals in Romania facing boycotts due to their response to the COVID-19 outbreak, we study the social media conversations on the topic, the emerging themes, the visibility triggered and the impact on the brand and actors involved. Drawing on a social media listening and crisis communication framework, our research looks to unveil the relationship between stakeholders' expectations and brand promise, aiming to foresee predictive crisis communication and management models.

Keywords: crisis communication; social media listening; online environments



Citation: Buzoianu, C.; Bîră, M. Using Social Media Listening in Crisis Communication and Management: New Methods and Practices for Looking into Crises. *Sustainability* **2021**, *13*, 13015. <https://doi.org/10.3390/su132313015>

Academic Editor: Dan-Cristian Dabija

Received: 3 October 2021

Accepted: 5 November 2021

Published: 25 November 2021

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1. Introduction

The widespread usage of social media today [1,2], along with organizations' efforts to establish solid relationships with stakeholders in online environment [3,4], resulted in changes of the communication ecosystem and, consequently, to shifts in crisis communication and management [5,6]. The academic debate concerning methods and practices of dealing with social media related crises [7,8] brings about the idea that crises management would profit much more from tools and methods provided by social media listening and monitoring [9]. We can foresee attitudes and representations of the public by means of looking into their conversations and understanding the mechanisms responsible for spreading news about a crisis in online environments. Moreover, seeing how the public perceives an event in social media means figuring out the emotions triggered by specific situations and topics. Nowadays, organizations are offered various tools, platforms and services for online monitoring in order to look and listen to conversations in online environments [4]. With the help of all these instruments, organizations have the resources to understand the mechanisms of online visibility and can explore its patterns [10–12]. They are also empowered to observe the ways users of social media platforms engage in conversations about brands and can observe their emotions towards events and messages [13]. However, as the digital ecosystem is fluid and dynamic, social media monitoring and listening are not enough for building a predictive model for crisis communication and management. There is evidence that, when compared to traditional communication environments, crises in online environments are much more difficult to anticipate and to fit into models [14], as theoretical and methodological grounds are still under development. To this end, we should add the fact that the huge amount of data broadcasted every minute on YouTube and similar platforms, as well as posts spread on Facebook and Instagram [2], require complex monitoring systems and complex methods of processing data.

At this moment brands can use an incredibly large array of tools and software applications to follow up and to monitor conversations that are of interest to them—either of immediate interest (such as a product/service problem) or of medium and long-term

interest (when a brand is following conversations about its industry in order to spot a trend or an upcoming change in customer interests and preferences). Before the COVID-19 pandemic, the market share of media monitoring software was one of the most dynamic markets related to the public relations industry. It is likely to continue to grow not only due to the impact of the pandemic but also to the general rise in adoption of digitalization by end-users, including the use of online social media platforms as well as the growing demand of online magazines and newspapers [15].

The current landscape in media monitoring and listening is defined by increased technical capabilities for gathering and processing larger amounts of data [16–18] and a growing appeal in establishing media listening routines [19]. As it is often the case in (digital) public relations, the practice is closely interwoven with ongoing conversations on ethics [20,21] and on the relation between practice and theory [22].

When considered from the perspective of crisis communication, a consistent use of social media listening and media monitoring employed to assess and to address real crises and negative buzz could rely on a framework shaped by four main actions: (1) monitoring the interaction between end-users and the brand via social media platforms; (2) listening to conversations and spotting possible triggers for crises; (3) managing reputation and visibility in digital media; and (4) sorting out relevant stakeholders.

Since most of the social media platforms are already providing brands with state-of-the-art tools for keeping track of metrics such as engagement, reach, numbers of likes, etc., the current research study focuses on methods of obtaining valuable insights derived from the content of the monitored conversations rather than their volume. Both business literature (comprised in white papers such as industry research reports, industry surveys, practical guides, etc.) and academic literature propose similar general understanding of the concepts of social media listening and social media monitoring. However, taking into consideration the rapid changes in monitoring practices and software, an official definition agreed upon by the main stakeholders—practitioners and researchers—is unlikely to be adopted soon. Drawing on a large corpus of definitions and examples of social media monitoring and listening practices, the working definitions [23] used are the following: Social media monitoring (SMM) is an established practice that involves monitoring and tracking a series of relevant social media metrics (agreed upon beforehand) that refer to relevant key words (products, services, competitors and industry in general), aiming to identify conversations where the brand could contribute (mainly in forging a mutual relation with its consumers) in spotting trends and influencers as well as in obtaining insightful information on their audiences. Social media listening (SML) is a process that enables a brand to carefully follow a significant volume of social media conversations by means of tracking relevant mentions referring to topics of interests. Its aim is to uncover strategic insights, to generate new content and to conduct a sentiment analysis. All in all, both social media monitoring and social media listening could be considered as an ongoing, circular process illustrated by Figure 1.



Figure 1. Social media listening as a circular process [23].

Both literature and practice in the field show that not all negative conversations and reactions in online environments result in crises [4,24,25] and that it is difficult to predict which ones are likely to generate a negative impact on the brand. There is no doubt that it takes a complex set of elements and a specific context for an event to expand from an issue to a crisis [13,26], as well as a certain level of attractiveness of the subject itself. Although there is significant interest in the literature to explore and understand the role that stakeholders have in transforming an event into a crisis [3,13], there is still much more research needed to reach predictive models. Both academia and practitioners have acknowledged the need for revising the tools and methods for online crisis communication and management that not only provide descriptive and analytical models [8,27–30] but also predictive ones [6]. The existing models in crisis communication available today are built around investigating the high influence that information form and source can have in spreading the problem and in transforming it into a crisis [28–30]. Although research has documented the fact that events built around topics appealing to the public are widespread, it has been noted that they are unlikely to have a negative impact on the brand, as they are seen as a paracrisis [24] or a firestorm [31]. Still, these events may result in brand controversies and impact the relationship with stakeholders [6] and in some cases generate financial losses. There is an obvious need for exploring more of these situations encountered in online environments and to build predictive models in order foresee events developing into crises. The scarce findings in ensuring predictive models for crisis communication and management in online environments represent the main gap in the literature addressed by our paper and a topic that we foresee will dominate the research agenda in the future. The main questions that will be investigated in this paper are as follows: what are the specific factors and elements that trigger brand controversy and how can organizations expect stakeholders to engage in conversations?

In response to the challenges that crisis communication and management faces today and the need to reach predictive models for practitioners, our research aims to shed light on how social media listening tools may be used in preventing crises and in understanding the threats that organizations may be facing in online environments. We depart from the idea of the fluidity of the online environment along with the huge number of messages and information spread daily having a significant role in how brands reach out to people. Moreover, we consider the important role that brand promise [23] has in establishing relationships between stakeholders and organizations and in ensuring core stakeholder loyalty and support for the brand.

Our research looks to unveil how social media listening tools may be used to point out means for reading events and crises online. The main research questions considered in the current research are as follows: *“How can social media listening tools be used for modelling crisis communication and management?”* and *“What role does the brand promise play in reading an event and responding to it in online environment?”* To respond to these research questions, we conducted two case studies analyzing the situation of private health-services providers in Romania facing boycott and outcry in the context of offering health services in the first months of the COVID-19 pandemic. With the help of automatic tracking tools used in monitoring social media (mainly Facebook because Instagram and Twitter results were irrelevant in these cases) and online media outlets, we analyzed the conversations and sentiments of the online public in order to understand the phenomenon, the potential networks spreading the situation and the potential connection with brand promises of the two organizations. We selected these two cases, keeping in mind their spread in both Romanian social media and online media and considering the high attention that the health system received in March–April 2020. According to financial and market analyses [32], two organizations—Medlife and Sanador—are occupying the first and third places on the private sector health services market and had, at the beginning of 2020, an increase in turnover. Both companies had faced brand boycotts early in the COVID-19 pandemic due to two distinct events.

First, on 20 March 2020, Sanador announced on its Facebook page and website that it offers RT-PCR tests for an equivalent of approximately 80 Euros, in a period when national authorities were struggling to increase the very low PCR testing capacity. Immediately after the announcement, the brand faced a huge number of comments and negative reactions and was accused of taking advantage of the pandemic and national emergency. The event was also covered by online media and triggered a debate regarding ethics, empathy and capitalism. The second case refers to Medlife’s decision in April 2020 to stop providing medical services to adults facing acute respiratory syndromes, regardless of whether they purchased a medical subscription. This situation was also covered by online media and triggered the public’s outrage and disappointment in online environments. Both cases are representative for context-based events transforming into crises and for breaking stakeholders’ expectations of the brand. Based on these two case studies, we point out (1) the role that social media listening has in understanding boycotts driven by emotions in unusual contexts and (2) the role that brand promise has in observing the threats the brand may encounter and in anticipating crises in online. The analysis conducted reveals that social media listening tools are useful in exploring attitudes, emotions and conversations in terms of the relationship with stakeholders’ expectations from the brand and especially when those expectations are close to the brand’s promises. Connecting the outcomes of social media listening with these elements may result in developing predictive models for crisis communication and management in online environments. As a side effect, media monitoring used in conjunction with social media listening and with a crisis communication framework might further unveil conversation topics that are migrating from media outlets to users’ Facebook pages, and it may also document the way in which media outlets amplify the visibility and legitimacy of various public actors.

2. Materials and Methods

The research design is grounded in crisis prevention theories [24,33,34] and social media listening [22] and aims to shed light on the methods and practices of looking into threats and crises through social media listening techniques and tools. Based on the methodology of case studies and having in mind digitization in management practices [35] and complex computation [36], our research aims to generate a multi-faceted understanding of how social media monitoring and listening may be used in developing predictive crisis communication models, keeping in mind the role that brand promise plays in threats, crises, emergencies and disasters. The cases considered for our study are generated by boycotts of two major brands operating as private health providers in Romania encountered in March–April 2020, during the early outbreak of COVID-19 pandemic. The two companies, Medlife and Sanador, faced public backlash and general outcry as they were considered to take advantage of the national emergency in order to make financial profit. The cases were explored with the help of social media monitoring and listening tools and by conducting sentiment analysis and thematic analysis on the corpus. Regarding sentiment analysis, we conducted both manual and automatic sentiment analysis and compared the results.

In both cases, data were collected by using an automatic system of tracking and monitoring based on a media monitoring service with access to a comprehensive data base. Better results may be obtained when using a local provider, especially in a cultural context where global suppliers of media monitoring services are not very well equipped to tackle challenges raised by language and culture (e.g., a relatively small market). It is important to point out that, in these cases, data collection took place after the analyzed events unfolded; therefore, they are not exhaustive. A search based on keywords was run on a vast database comprising more than 500 media channels (TV, radio and online newspapers) active in Romania as well as on social media platforms (Facebook, Instagram and Twitter). Subsequently, regarding treatment of data, the total number of matched cases was manually examined in order to weed out any irrelevant pieces of articles and/or data. For the Sanador case, a total number of 326 materials were collected, and, after weeding out the irrelevant results, 232 pieces of texts (media articles and Facebook posts) were kept in the data base for processing. Most of them are covered the highlights of the crisis (20 March 2020 and 21 March 2020), with a few pieces published between 23 March to 26 March. In the case of Medlife, a total number of 157 materials were collected, and, after weeding out the irrelevant results, 134 pieces of texts (media articles and Facebook posts) were kept in the data base for processing. The Medlife crisis was shorter and less visible than Sanador's. Basically, it lasted only a day, with a visibility peak on 13 March. The initial announcement made on 12 March was largely shared both by media outlets and on Facebook only on the next day, on 13 March 2020. It also generated less shares on Facebook and less news. The initial announcement was impossible to track: On the Medlife Facebook page, the initial post was deleted, and the only piece of information to be found is the update made towards the end of the day on 13 March. It registered 158 likes and 107 shares; meanwhile, the comments were switched off. One of the main differences in the method news were spread about the two cases was that in the case of Sanador, the original post was captured and then used to generate media articles (most publications just put a headline and some comments); meanwhile, in the case of Medlife, there were basically four original articles, re-posted by other media outlets.

The original Facebook post made by Sanador on the company's official account was deleted days after the crisis, but data about its impact were captured in re-posts and shares. Two hours after the announcement, the post had 1.800 shares and 1.900 comments, with hundreds of shares made by people sharing Facebook posts and by public figures that took up a position related to the price or to opportunity of the measure itself. Our current investigation covers only a fraction of the conversations around Sanador communicating its capacity to provide tests on demand for the general population. Monitoring in real time and properly tracking conversations about the brand and its services and about the main themes associated with the case could reveal more insights into the matter.

Both companies deleted the initial posts due to the high number of negative reactions and comments. This has a direct impact on our corpus, as we had access to the initial posts via captures in online articles and Google images. However, this limits our corpus and should be considered as an important aspect for the design of crisis analysis with means of social media listening. The cases analyzed within the current article rely on data gathered 6 months after the events unfolded and on public available data. It is for these reasons that the number of entries considered within the selected corpus may appear to be limited when considered against how much visibility both cases gained in a timeframe of 24 h. Data gathered were subject to thematic analysis and sentiment analysis. We used open coding to bring out the most frequent themes and then grouped the emerging themes and explored them in terms of relationship to brand promise, stakeholder expectations and general pandemic context. The online media and social media corpuses were explored separately to identify the specific themes and were compared in the last phase of the research study. While coding was conducted manually, sentiment analysis was conducted both manually and automatically with the help of monitoring software. Sentiment analysis was performed to unveil the attitudes and emotions towards the brand and to explore the relationship between context-based boycott and likeliness to use the services of the organization in the future.

Considering the high importance of data privacy, in the current research study only data from and related to public profiles, pages and websites were collected. Data were gathered strictly by following Facebook's regulation and privacy policy. Furthermore, the names of the users have been anonymized during treatment of data. The identity of the users was anonymized, labelled by category and assigned a number (e.g., SMU01 means social media user number 01).

3. Results

Drawing on our data, we managed to identify and explore crises' timelines, anatomies and communication networks triggering wide spreading and negative visibility. By spotting the interventions and spikes of the two cases and seeing the communication themes and stakeholders' reactions, we can also see how, in specific contexts, organizations' decisions may expand from events to crises.

As shown in Figure 2, online visibility and subsequent public outcry related to Sanador's announcement about providing COVID-19 tests on demand, for the general population at a high price, registered a peak on the very day of the official communication (Friday, 20 March 2020), declining slightly on Saturday (21 March 2020). It is worth mentioning that two updates from the management were published on Friday afternoon on the brand's Facebook page, providing more information in order to address the public's concerns related to the lack of tests at a national level and to the fairness/ethics of the offer.

Medlife's crisis (See Figure 3 below) started to develop slowly, with only a few Facebook shares and media reports on the day of the initial announcement (12 March 2020) and a spike on 13 March 2020, both in online media and on Facebook. After this, Medlife's unwanted negative visibility started a speedy decline. As opposed to Sanador who limited its public relations and communication actions related to the problem at hand (namely the bad buzz created by their testing on demand for COVID-19), Medlife started a communication campaign centered on audience education with respect to how to properly react and treat a common cold and flu and how to proceed in case individuals have symptoms associated with SARS-CoV-2 infection (the campaign, *Isolated but still together* started on 31 March 2020).

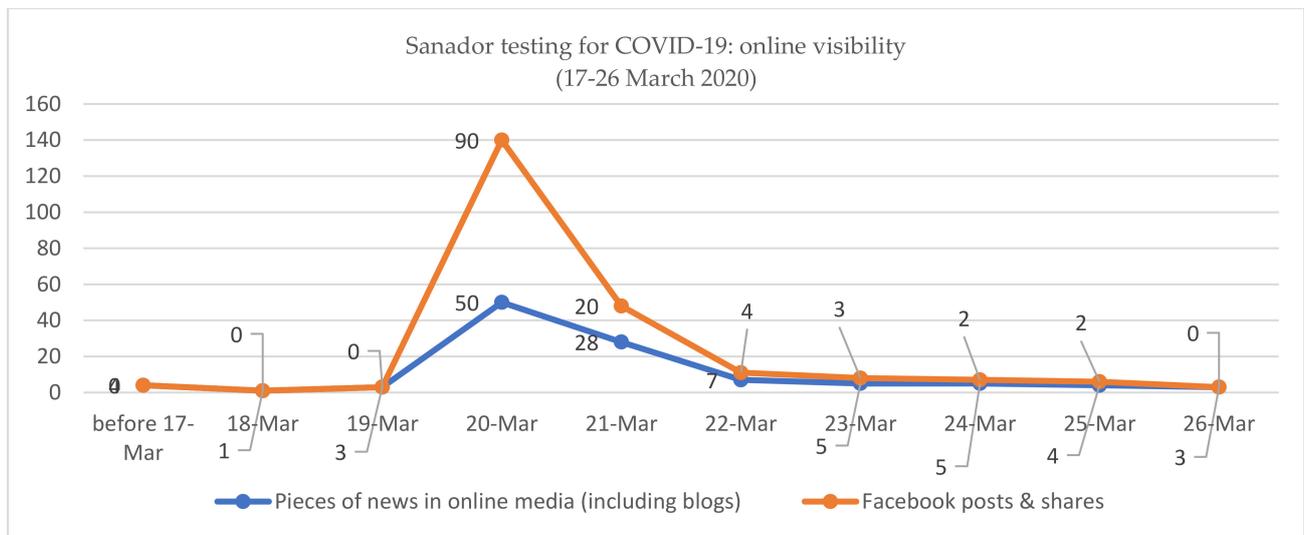


Figure 2. Sanador testing for COVID-19: online visibility in media outlets and social media.

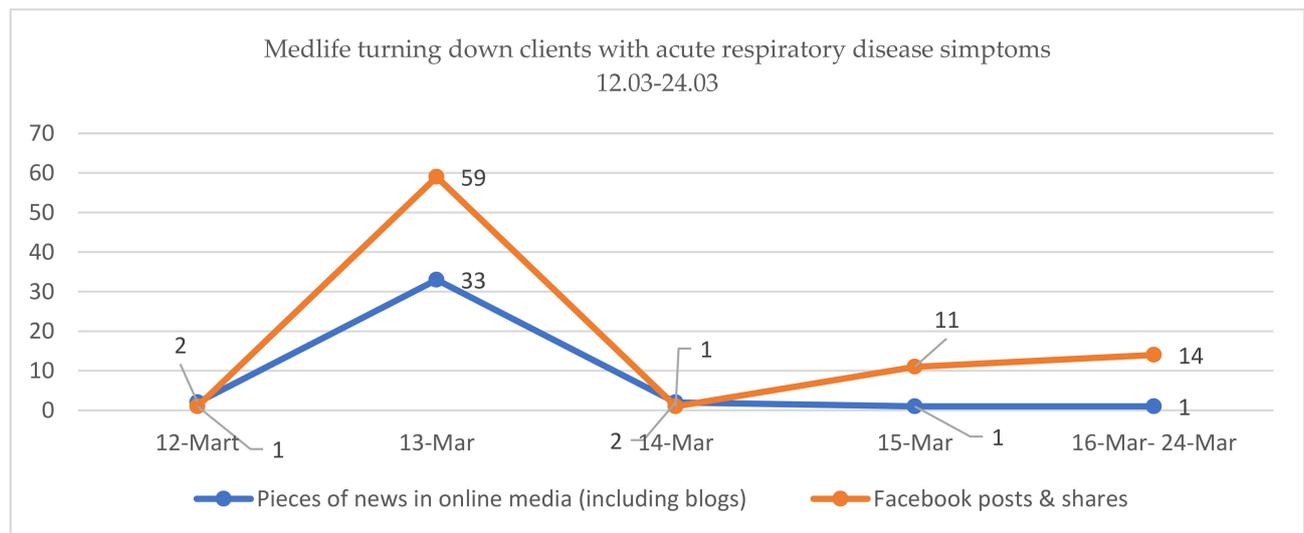


Figure 3. Medlife turning down clients with acute respiratory disease symptoms (12.03–24.03) online visibility in media outlets and social media.

Themes emerging from Sanador’s case are observed to be spreading across different channels and focus on the initial statement of the company when announcing RT-PCR tests (see Figure 4). While most of the themes are linked to the costs of PCR tests in the context of low national infrastructure for COVID-19 testing, a distinct theme may be observed that was paid attention to late 20 March 2020, when a former public health official declared that some tests may result in false results.

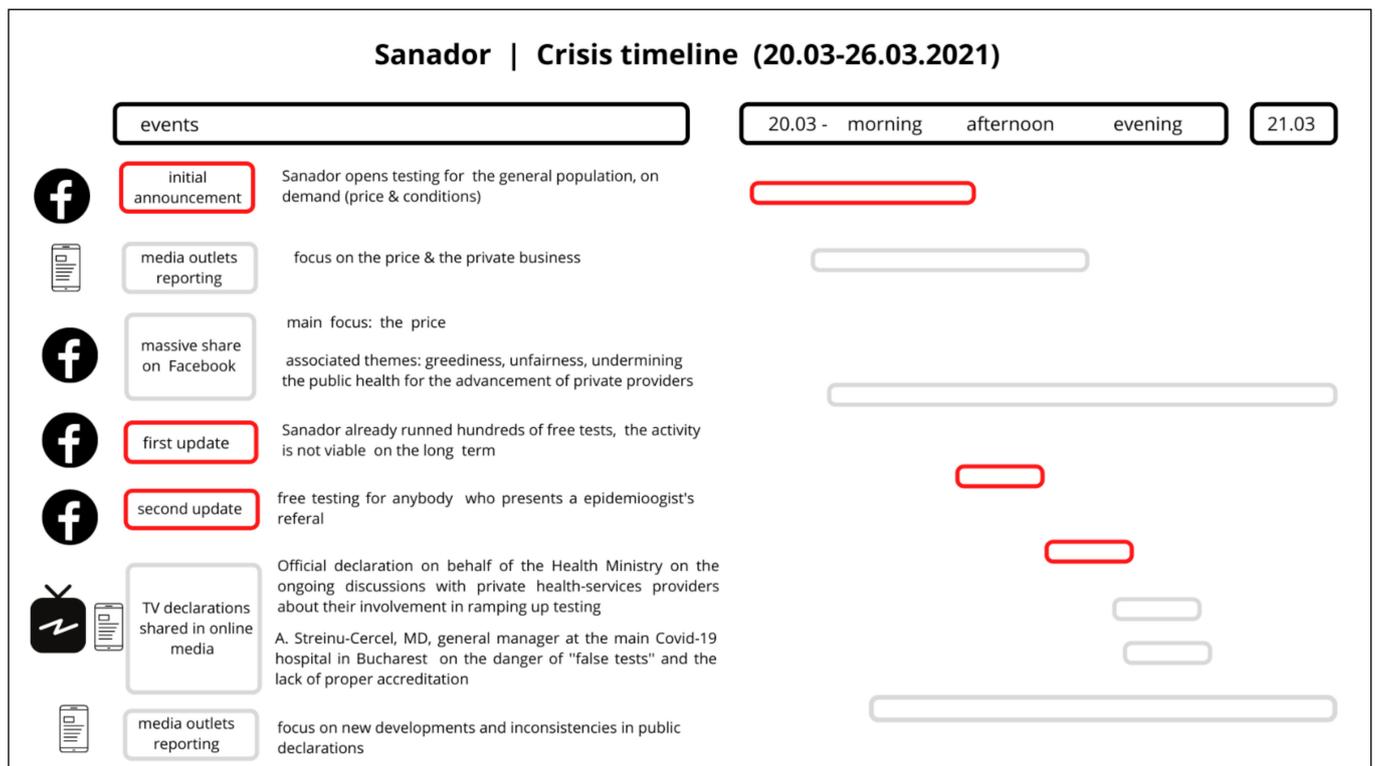


Figure 4. Sanador testing for COVID-19. Crisis timeline: actors and media channels.

Days before the crisis, the media reported the extremely low RT-PCR testing capacities of the public health system, with several articles pointing out discussions between state authorities and the main private health services providers about their eventual involvement in scaling up testing. However, the topic was not used in a strategic and coordinated manner by the private contractors to showcase their contribution to increase society's resilience. Therefore, when Sanador updated its initial communication and pointed out the numerous tests they performed for free and to the impossibility of sustaining this in the long term, there were barely any voices on Facebook that remained at the side of the brand. As shown in the timeline above, the focus on media reporting about Sanador tests on demand was the price tag (80 euro), which is prohibitively expensive for the average citizen in Romania, especially for senior citizens that were thought to be, at that time, the most vulnerable in facing the virus. Moreover, the official position of the Health Ministry (broadcasted on a private TV channel) was literally drowned by the media when they largely shared another TV intervention made by a medical doctor (general manager of the main hospital dedicated to infectious diseases in Bucharest). His opinions, encapsulated in formulas such as "beware at false rapid tests" and "a special accreditation to run RT-PCR COVID-19 detection tests is needed and I very much doubt that Sanador has one of these," were widely circulated in all kinds of media outlets.

Unlike Sanador, Medlife's crisis lasted only for one day (see Figure 5). The initial announcement, issued on 12 March 2020, was shared the next day, both by online media and social media. The company only kept the update issued at the end of the first day of bad buzz on its Facebook account (13 March), but media outlets were not interested in sharing it anymore. However, between 14 March and 24 March, Medlife's measure to suspend appointments for people presenting acute respiratory disease symptoms was shared multiple times, although it was not a piece of concern anymore both from the viewpoint of the company and the media. The bad buzz continued at a low level for many days after pointing out a latent audience interested mainly in the themes associated with Medlife action (greediness and undermining essential services to the population) rather than in Medlife services themselves.

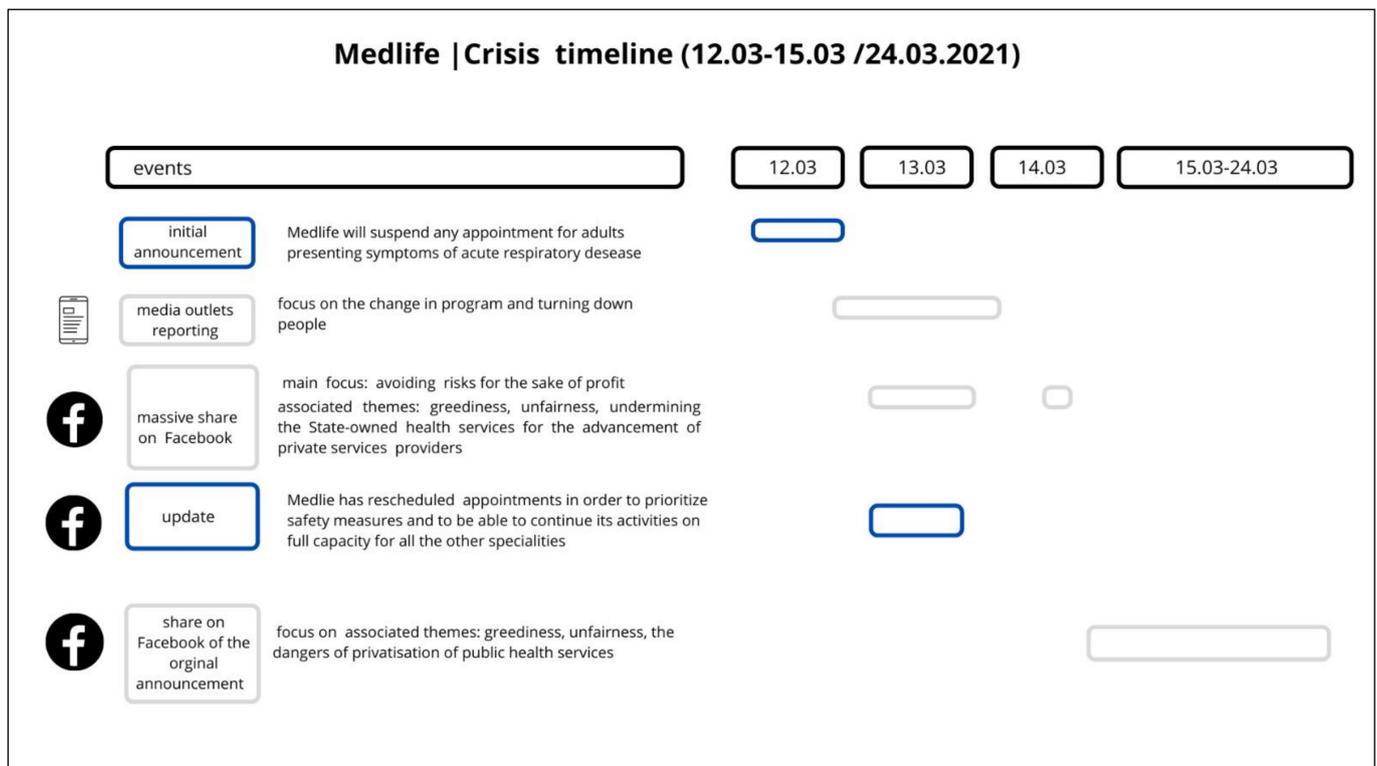


Figure 5. Medlife’s crisis timeline.

In Sanador’s case, when comparing main themes in online media and social media (shown in Figures 6 and 7), a pattern seems to emerge with respect to the brand’s online visibility. Media focus on the price tag translates into greediness and other associated themes in social media conversations, meanwhile legitimate concerns to a conflict of interest concerning two members of the government and their respective positions as medical practitioners for private health services providers are turned in a narrative about greedy private corporations vs. a crippled state that is unable to defend the wellbeing of its citizens. Most media reports about tests on demand were focused mainly on the price tag and basically shared “bare” information provided by Sanador (N = 185). Other voices enabled by online media constructed the conversation around the bad timing (a global pandemic should be a moment of solidarity and not an occasion to reach for more profit) or the sheer greediness of the brand, with high visibility for this topic during the peak of the crisis (N = 74). A public appeal for requisitioning Sanador tests and testing facilities (N = 20) launched by a Romanian member of parliament gained momentum both in online media as well as on Facebook; meanwhile, the classic theme of an ongoing conflict of interest between the state and the brand gained visibility throughout the crisis since its beginning until its last echoes (N = 32), when the health minister resigned (26 March 2020). The media acknowledged the public’s furious reactions on social media (not only during the second day of the crisis but also towards the end of the monitored period, N = 13) and dug out past problems experienced by Sanador in two online publications (N = 2).

On social media, the most visible themes were also the most polarizing ones, constructed around several main opposing discourses: the greediness of private businesses, the dangers of further privatisation of health services, the incapacity of the state to properly manage its resources and the existing conflicts of interest at the government level (members of the government, including the health minister, were active employees of private health services networks and were most likely to benefit by a further privatisation of health services). Opinions favourable to Sanador were a minority and were identified only on

social media; their angle was in accordance with one of the main narratives about the state's incapacity to ramp up testing capacities.

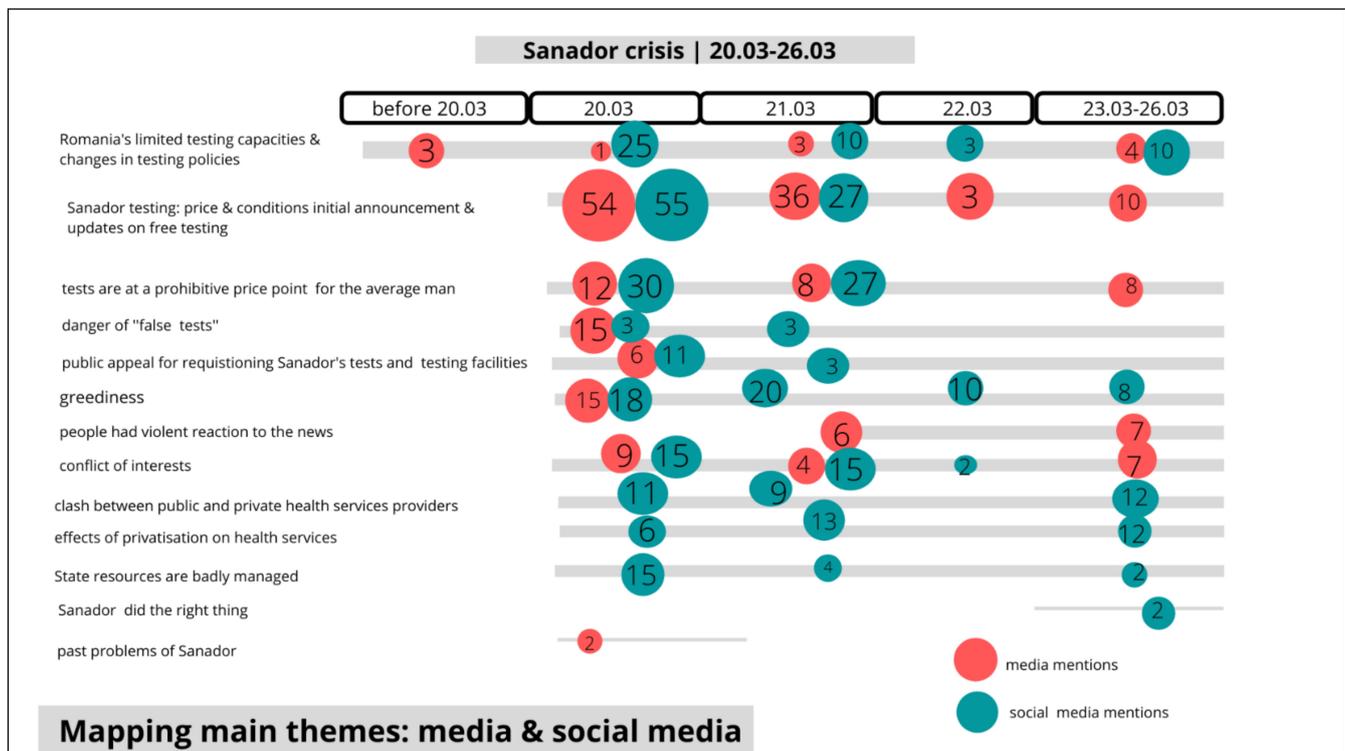


Figure 6. Sanador testing for COVID-19. Main themes in online media and social media.

Medlife bad buzz covered a variety of themes that were mainly in social media. The dominant frame in media depicted Medlife as a company taking an ill-thought measure during the pandemic. The most frequent expressions used to convey the message were built around the idea of bad timing as well as missing the ability to deliver their basic mission: "just when doctors are needed most," "in the middle of a pandemic" and "when the virus is spreading rapidly" (N = 34). However, we tracked only one direct accusation of breaking the brand promise: It is made by a doctor on his personal Facebook account and quoted by the site of a news TV post. Other comments related to brand promise or at least to the core mission of a health service provider referred to the lack of solidarity and empathy as well as the failure to assume due responsibility (N = 28). Another recurrent topic used to frame the general situation reminded the audience that Medlife is the largest private provider of health services in Romania and one of the main private employers in this sector (N = 11). The act of repeating this information—sometimes included in the title of media articles—indirectly shed light on the entire private sector.

Privatization of strategic companies or services is a sensitive topic in a former communist country such as Romania, and powerful narratives were constructed around the idea that essential services for society and profitable companies were intentionally crippled to make place for private companies (local or foreign). What is interesting to observe in the case of Medlife is the way in which the larger theme of the "private-owned company" is approached: namely, as being inherently greedy (N = 81) and hypocritical (N = 77) and even cynical (N = 3). A variety of expressions were used to convey this idea, mainly on Facebook: "When there is money to make, we are the first in line; in hardship, we take a step back" (in Romanian: La plăcinte înainte, la război înapoi); "we retain our right to select clients"; "Medlife only wants patients in good health"; "human kindness from private providers" (in Romanian: omenie privată); "the patient as a commodity" (in Romanian: pacientul-marfă); and "Medlife chose a good time to be an asshole". This creative burst

together with the ample circulation of the above-mentioned expressions that passed from social media to media outlets and then again to social media points to how widespread the general opinion is on how private businesses thrive on people's misery. Another theme associated with the greedy and hypocritical nature of private companies is the conflicts of interest between the state sector and the private sector, which is encapsulated in the situation of the health minister (at that point in time, the Minister for Health, an MD, had retained his right to practice medicine and was periodically performing surgeries in a private hospital owned by Medlife). There are less media articles directly pointing out the conflicts of interest and naming the situation as such than in the case of Sanador; but there are a lot of titles reporting the following: "Medlife, the employer of the Minister for Health decided to (...)" (N = 10). As in the Sanador case, various media outlets quoted members of the public and their opinions on the case, thus increasing the visibility of the brand as a company that disregards its core mission and is unwilling to commit when the situation becomes uncertain.

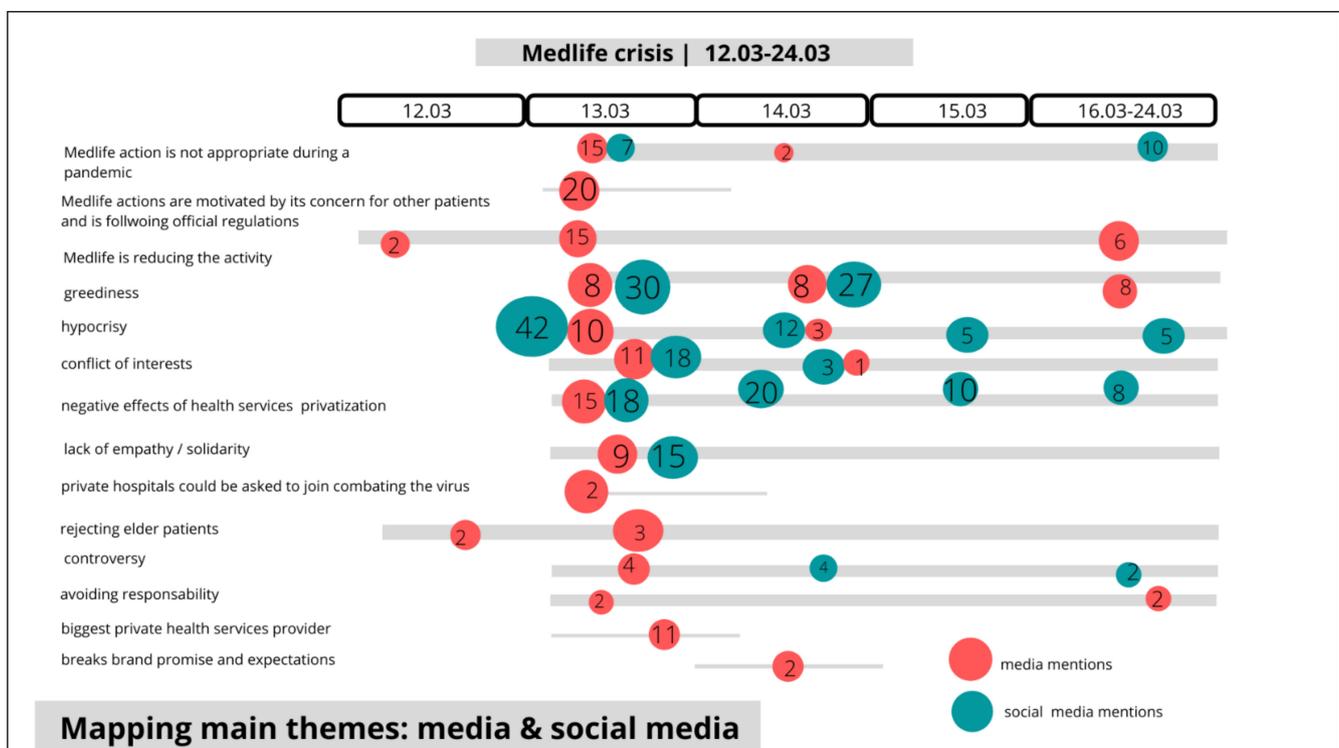


Figure 7. Medlife's case. Main themes in online media and social media.

Last but not least, several media outlets transformed the information referring to "adult patients" into a headline stating that "elderly patients" with respiratory problems are no longer received at Medlife (N = 5). The headline was not broadly shared on social media. Neither were headlines or themes such as capitalism and neo-liberalism.

4. Discussion

Data emerging from our research shows the high interest that media and social media audiences proved to have for the two cases and their linkages with the general context of COVID-19 pandemic outbreak. Although the particularities of the two situations are scrutinized, some patterns may be pointed out. Even though our research is limited to the two cases analyzed and is restricted to the corpus revealed by the monitoring software used, some interesting elements emerge regarding our research questions, as it will be elaborated below.

Firstly, both cases prove the role that brand promise has in limiting the effects of a crisis. Brand promise can cause boundaries crises and it does not seem to be in a direct relationship between high negative visibility and medium and long-term stakeholders' resentment. By comparing how conversations tend to move from one medium to another and across multiple audiences (transitioning from Facebook to online media, to mainstream media and TV and then back again on Facebook) in a matter of hours, the Sanador case offers valuable insights into what may happen when a brand delivers its promise ("access to best services and medical technologies") by ignoring social tensions and the general context. What is most interesting is the fact that although Sanador's boycott was significantly intense and triggered stakeholders' outcry and that many patients stated that they would never use the health services of the brand again, the operations, financial situation and market share of the company were not affected. In fact, the crisis produced a high level of negative visibility and caused negative sentiments and hate speech on social media, but, at the end, when confronted with a medical situation and the need for a medical service, stakeholders had no problem in reaching out to the organization's medical assistance. Although the company's decision to offer RT-PCR tests at a high price in the context of national emergency for COVID-19 PCR testing sparked disappointment, hate and resentment, all these attitudes and emotions had no linkage with brand promise and with the consumption behaviours of clients using Sanador's health services. Limiting patients access to pre-paid medical services had the potential to affect trust in the health service provider and to have a negative impact on brand promise in the case of Medlife. Unlike Sanador, Medlife was accused of breaking contracts with patients in need of medical care. Still, by looking at the data in the pandemic context and keeping in mind the national lockdown and strictly limited access to medical services all over the country, we may further observe that it was unlikely to affect brand promise and relationship with stakeholders.

Secondly, in turbulent times, emergency and disasters and emotions and negative attitudes should be seen as context driven and treated as such. The two cases scrutinized in the current paper point out that the expectations that stakeholders have from companies during unstable situations are fluid and may easily shift. It is worth mentioning that financial and economic report of the private medical providers market show an increase in operations, services and profit in 2020 [32]. This increase is seen in direct relationship with the scarce state-owned health infrastructure and medical services provided by public clinics, hospitals and care units.

Thirdly, as mentioned in the previous sections of this paper, although some cases may trigger resentment and outcry, they do not necessary result in a major crisis for the brand. As the two cases show, the medium-term and long-term situations reveal that the brand was not affected and that it managed to recover its visibility and relationship with stakeholders. Thus, although precrisis and social media storms trigger emotions and resentment, they do not necessarily produce major effects such as reputation and financial loss. As revealed by our findings, brand promise has an important role in flattening the effects, as brands managing to deliver according to the brand promise and core stakeholders' expectations end up in flattering the negative effects. Moreover, we must underline the importance that general context has in shifting attention from one subject to another.

Lastly, our research shows that social media listening should be grounded in crisis communication framework to look for emotions, conversation themes and attitudes likely to impact the brand's promise and stakeholders' expectations in specific contexts. In this respect, the development of social media listening and crisis prevention fields should be based on understanding the outlooks of both stakeholders and core stakeholders of the brand to foresee messages, decisions and events that may expand into crises. Automatic tools developed for reading events and predicting their likeliness to develop into crises need to consider the dynamics between brand and its stakeholders and the reasons that the latter have in using the companies' services.

5. Further Research

Our research provides insights for the usage of social media listening in crisis communication and management as well as for the crisis analysis. First, drawing on our findings, we observe that research design for understanding the anatomy of crises should be developed prior to crisis onset. Thus, brands may reach a solid understanding of the situation taking place and further act to avoid stakeholders' disapproval and resentment. Analyzing a crisis after its end based on online data and on data extracted from social media requires acknowledging the limits with broader consequences on insights and lessons learnt. In addition, any research design aiming to scrutinize a crisis by social media listening tools after the event unfolded should consider the fact that data are not stored in the long term and that brands may delete posts and materials related to the crisis. A significant part of input data is lost, together with valuable context information and learning opportunities.

Moreover, the current article may be useful for further research as it brings together predictive models of crisis communication and management [3,6,7] and efforts made to read threats that may turn into crisis with means, practices and usage of social media listening tools. In this manner, it will be possible to detect not only visibility and media coverage (by observing the volume of conversations) but also the themes they revolve around [4,13,18]. The relevance of these themes rather than the number of negative comments is currently explored as being an indicator for a probable cause of crisis. In addition, further research and design should consider looking at social media conversations, emerging themes and their relation with brand promise and core target expectations [23].

Author Contributions: Conceptualization, C.B. and M.B.; methodology, C.B.; design of data collection and treatment of data, M.B.; validation, C.B. and M.B.; data curation, M.B.; writing—review and editing, C.B. and M.B.; visualization, M.B.; supervision, C.B. and M.B.; project administration, C.B. and M.B.; funding acquisition M.B. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by Research grants for young researchers (2019–2021), supported by National University of Political Studies and Public Administration (SNSPA), Grant Number 47/2019.

Institutional Review Board Statement: Not applicable.

Data Availability Statement: Processed data are available on request.

Acknowledgments: The authors would like to thank the media monitoring company for their assistance with the collection of data. For commercial reasons, their name is not made public.

Conflicts of Interest: The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

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