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Article

Pandemic on the air: a case study on the coverage of new influenza A/H1N1 by Brazilian prime time TV news[1]

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ABSTRACT: In this paper we analyze the coverage of the pandemic influenza caused by the A (H1N1) virus by the main Brazilian TV news. Jornal Nacional (JN) – which can be roughly translated with National News – reaches an average of 25 million people throughout the country daily. We have observed that the attention cycle given to the new flu by JN lasted approximately five months with significant space given to the disease. Most of the news highlighted the number of illness cases and the health measures to control the infection. Only a small amount of news dealt with issues related to research and scientific development, and included scientists as interviewees or as information sources. We believe that the coverage made by JN may have contributed to the dissemination of what some authors refer to as a "pandemic of panic".

Introduction

At the end of April 2009, the media of several countries started disseminating massive information on a new type of flu, whose causes were not clearly understood and which seemed to be more lethal than the seasonal flu. Although there is no consensus among specialists on when, how and where the new virus type A/H1N1 first appeared, its potential to cause the first severe pandemic was taken into account with no delay.[2,3,4,5] Several studies proved that the new type of virus was the result of a combination of segments of human, avian and swine *influenza* circulating in North America.[6,7,8,9]

The first confirmation of the disease was made by the U.S. Centers for Disease Control and Prevention (CDC)[10] on April 15th. Nine days later, the circulation of the new virus was confirmed in Mexico, and information about the number of respiratory infections and deaths which were or may have been caused by the new virus A/H1N1[11,12,13] began to spread. On April 25th, the World Health Organization (WHO) warned the world about the risk of a pandemic, and called for health authorities to monitor the cases of flu and pneumonia. The United States declared that the disease was a national emergency. In Brazil, the government set up an emergency task force to deal with the issue.

Researchers from CDC regarded the emergency of this disease as the major pandemic threat since 1968.[14] During the four weeks following the initial CDC report, 41 countries confirmed that they had been infected with the new flu, with Mexico and the U.S. being the most affected. During this period of time, an overall number of 11,034 illness cases and 85 deaths occurred in the world.[15] On June 11th, the WHO officially declared that the new flu was a pandemic.[16] The rapid spread of the flu – which reached the entire world in few weeks – and the high degree of sensitivity of the population gave the impression that a significant part of the world population would be affected by the new A/H1N1 over the next two years.[17,18]

According to some studies, television is one of the most important means of information about health/medicine issues, both for the general public and for health professionals. Not only is the public highly interested in health/medicine news broadcast by the media, but also the media dedicate a substantial amount of time devoted to science and technology to health and medicine issues.[19,2021,22,23,24,25] When accidents, outbreaks, epidemics or pandemics take place, the media – in particular television – play the role of warning the public about the existence of a problem or a public health crisis.[26,27,28,29]

However, several studies have shown that the journalistic coverage of health/medicine issues tends to fail. Various problems have been identified: preliminary results are highlighted rather than mature research; superficiality; sensationalism; scarce mention of the risks and costs associated to medicines or new treatments; imprecise information based on scientific articles; overestimated health risks; imprecise figures

of the incidence or prevalence of diseases; exaggerated emphasis on suffering and tragedies such as crimes, accidents and catastrophes with little informative content; exacerbation of the facts through images and special effects accompanying the narration, which may reduce the line separating information from entertainment and/or fiction.[30,31,32,33,34,35,36,37,38,39,40,41]

No matter whether imprecise or accurate, the news influences the perception of the public. Unlike existing statistics, individual estimates of death causes may be influenced by the frequency at which the media deal with diseases.[42] In the case of the avian flu, a study has shown that higher levels of exposure to television were linked to higher levels of anxiety linked to the virus.[43] Even without the materialization of the expected pandemic, the exposure to TV news may contribute to a "pandemic of panic".[44,45] In this study, we have analyzed the content of the coverage of A/H1N1 flu by *Jornal Nacional* (*JN*), broadcast in Brazil.

Methodology

We have chosen the coverage by *JN* as the subject of this study because it is the TV news with the highest audience in Brazil. It is broadcast during prime time, reaching about 25 million people daily.[46] We have watched all the programmes recorded between the beginning of April – therefore following the coverage of the new flu since its beginning, on April 24th – and the end of August, when the coverage of the disease became sporadic. This way, we could examine a whole "attention cycle" related to the new flu A/H1N1, defined by an increased amount of news about this topic until its decline.[47,48,49,50] We have created a protocol to analyze the coverage by *JN,* based on the protocol for the analysis of stem cells created by Nisbet[51] and on other studies of media coverage and/or perception of risks, medicines and diseases.[52,53,54,55,56,57,58,59,60,61,62,63,64]

Results

During the analyzed period of time, 157 pieces of news about the new flu A/H1N1 were found. The disease was introduced by *JN* not earlier than April 24th, i.e. ten days after the CDC had published information about the disease. It was described as a disease which had broken out in Mexico where it had affected the highest number of people, and then reached the U.S. and other countries. Until May 21st, the disease was given daily remarkable coverage. However, after May 21st, this topic was put in the shade by more pressing issues: the flood that reached north and north-east Brazil, Airfrance flight 447 air crash, pop star Michael Jackson's death, the scandal involving the President of the Senate. The new flu continued to be a source of news, yet it lost importance.

It was no earlier than June 11th – when it was declared a pandemic by WHO – that the new flu came back on the *JN* news, being given again daily significant coverage. In July, there was a second peak of attention, partially justified by the beginning of winter, when flu and respiratory diseases tend to spread more easily. After August, the issue generated only sporadic news, which is why we have considered the first attention cycle over.

Figure 1 shows the number of pieces of news dealt with on a monthly basis.

62 out of 157 pieces of news (i.e. 37%) were given space at the opening of the TV news, which shows that the new flu A/H1N1 was regarded as an important issue for the TV news. As for their duration, each piece of news lasted 10 to 322 seconds (that is 5 minutes and 22 seconds). The median of the news duration, each taken individually, was 1 minute and 45 seconds – with half of the total number of news lasting less and the other half lasting more. The relative duration, that is the percentage of time the TV news dedicated to each piece of news, varied from 0.6% to 19%. The average relative duration was 5.4% and the median was 5.8%. Taking into account all the pieces of news broadcast daily, the new A/H1N1 occupied 0.6% to 43% of the TV news overall time, with an average and a median of 9.7% and 6.1% respectively.

Despite different percentages, six frames were identified during the coverage of the new flu A/H1N1 by *JN*: (1) spreading of the disease/suffering, with a focus on the number of suspected cases, either confirmed or discarded, and on the deaths caused by the new flu; (2) disease control, with a focus on health measures taken by governments, businesses and citizens to avoid the infection or to treat the disease when the infection occurred; (3) research and development, with special stress on scientific research aiming at understanding the processes and mechanisms related to the infection and the new virus transmission, as well as the development of diagnosis tests, medicines and vaccines; (4) medical and scientific background,

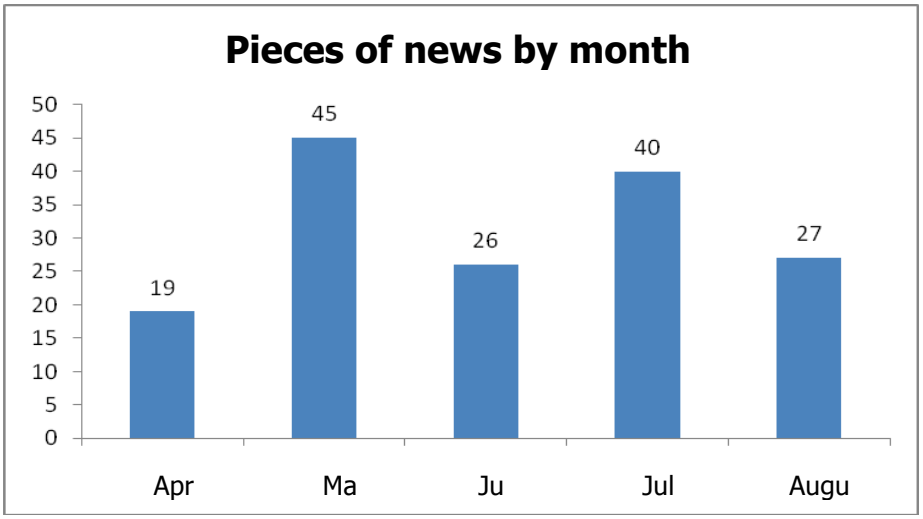

Figure 1. Distribution of the 157 pieces of news found during five months coverage, i.e. from April to August.

describing research activities, summing up known results and discoveries related to the disease, and describing known applications or potential medical uses; (5) economic impact of the new flu, with special reference to the losses affecting traders, tourism and tourists; (6) personalization, which emphasized the suffering of those affected by the new flu: people who contracted the virus and became sick or had relatives struck down or killed by the disease.

The main and most frequent frames were "disease control" and "spreading of the disease/suffering"; no other frame reached a frequency equal to or higher than 10%, as shown in figure 2.

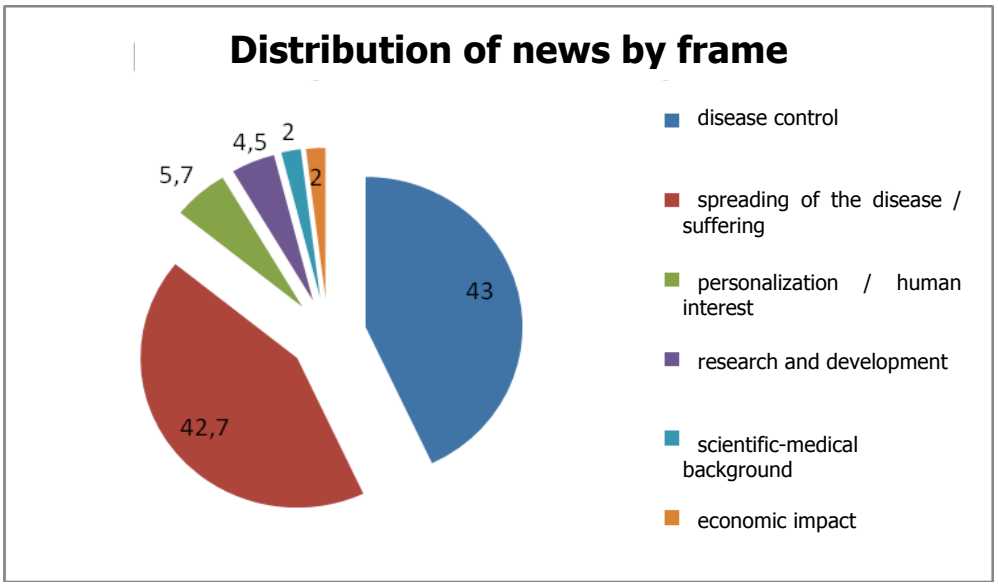

Figure 2. Distribution of the pieces of news according to the six frames identified during the coverage.

In our analysis, we have distinguished between the sources of information – official(s) or institution(s) responsible for providing the information used to build the news (sources) – and the voices, people or institutions directly interviewed in order to create the media news. In 9 out of 157 pieces of news no source of information was mentioned. In the remaining 148 pieces of news government representatives and authorities, doctors and international authorities/representatives were the main identified sources of information, as shown in figure 3.

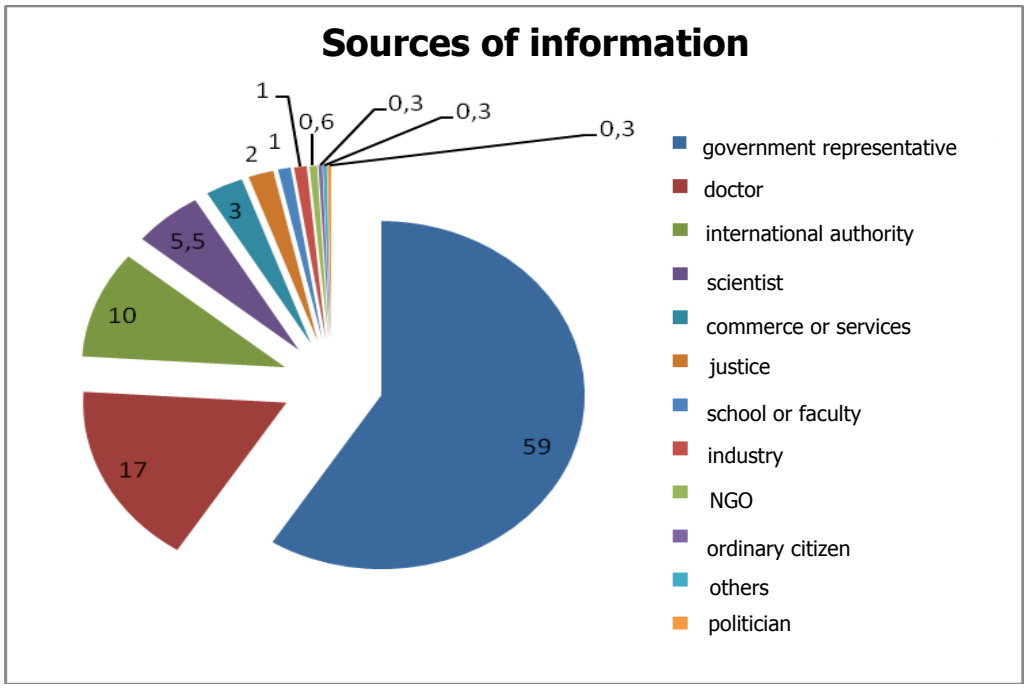

Figure 3. Percentages of the different sources of information mentioned in the news.

In 67 pieces of news nobody was consulted, which means that there were no "voices". In the remaining 90 pieces of news, 245 voices were found. The most frequent – and the only significant ones – were provided by ordinary people, government representatives and doctors (figure 4).

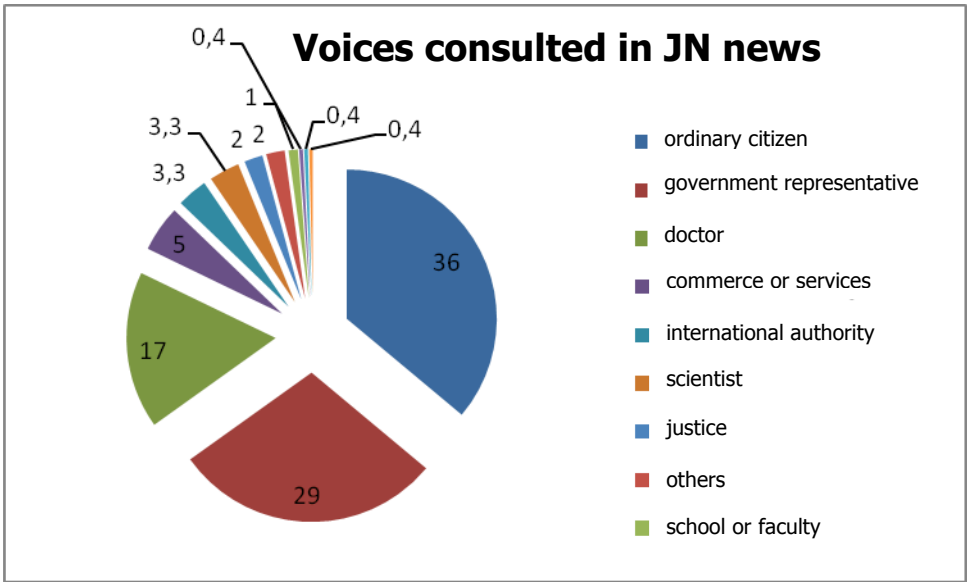

Figure 4. Voices consulted in *JN* news during its coverage of the new flu A/H1N1.

Attention is to be drawn to the difference between the sources and the voices of the TV news: official sources prevailed in one case, ordinary citizens prevailed in another. This seems to indicate that sources and voices fulfil different functions during the TV news. Sources work as reinforcement, legitimization, and sign of credibility, whereas voices are instruments to place the topic within the everyday life of the audience.

Discussion

The media, in particular television, generally provide episodic coverage of events, facts and deeds, focused on some social players, topics, events, cause-effect relations.[65,66] Public health crises seem to disregard this pattern, catching the attention for longer periods of time. The attention cycle of flu A/H1N1 by *JN* lasted for 20 weeks and registered two peaks. The highest peak occurred in the second and third week, during the emergency of the new and potentially dangerous disease, as the risk increased that it affected Brazilians, and later spread throughout the country. The second peak occurred during the winter, which in the country takes place in July, when usually the incidence of respiratory diseases increases. The flu was not so new, yet the increased number of illness cases renewed the alarm and panic. Therefore, not only the number of cases or deaths, but also the potential for the dissemination or the actual dissemination of the virus within the Brazilian population were significant factors contributing to the importance peaks of flu A/H1N1.

It seems that while the new flu was spreading in North America, it did not deserve the attention of *JN*. It had to become a world threat, capable of reaching Brazil, to be worth the status of news. During the first days when the news of the new flu was disseminated worldwide on the basis of the death rate observed in Mexico, the new virus seemed more lethal than the seasonal or common one. In the reports broadcast at the beginning of the attention cycle, *JN* turned these preliminary data into facts, presenting the flu A/H1N1 as much more dangerous and lethal than the common one. This may have contributed to a disproportional panic among citizens if compared to the real death risk. Also in 2009, in the first British coverage of the pandemic we assisted to a massive exaggeration by the media. During the TV news, frequent comparisons with the 1918-1919 Spanish flu were used to amplify the danger, and the virus was frequently referred to as "lethal" or "killer".[67]

The literature on the dissemination of news related to diseases shows that the profile of media coverage tends to change over time. For instance, in the coverage of avian flu, three discourse phases were identified in the news between 2004 and 2006: the first, identified as "ringing the alarm bell", had predominant statements of fear, and the risk of a pandemic was highlighted; the second was referred to as "mixed messages", where the threat shared the media space with national plans to tackle the disease and medical promises (vaccines and treatments); the third, identified as "severe crisis and control", was used to help mitigate the anxiety created previously, as the avian flu became a near threat. Because the coverage of the new flu by *JN* started when the disease was threatening Brazil, and it was widely based on the arrival and circulation of the virus in the country, the phase called "severe crisis and control" took place immediately after the "ringing the alarm bell" and "mixed messages" phases. Figures have been presented without ostentation or amplification through projections or comparisons. The frames referred to as "disease control" and "spreading of the disease/suffering" alternate one another in the coverage.

In the United States in 2009, health topics occupied 4.9% of the media space, with the coverage of the new flu representing 30.2% of the total.[68] Despite the Brazilian context being different and the matter being a public health issue, flu A/H1N1 reached higher figures, accounting for 43% of the TV news overall time – and during a further 10-day coverage the new flu occupied 20% or more of the TV news overall time. Opening headlines on flu A/H1N1 during *JN* news were frequent, accounting for 37% of the information provided by *JN*. In the Chinese newspaper "People Daily", 12.8% of the news about SARS was published in the front page, and 23.6% appeared in the second page.[69] The space dedicated to the flu during peak times indicates that it was given considerable importance.

Several studies have shown how the impact of the news largely depends on the sources it is based on, and how journalists working in the health and medicine fields may depend more than others on their sources of information, particularly when public health crises arise. In the coverage of diseases with a cluster-type incidence in some areas, such as flu epidemics or leukaemia cases in communities close to places exposed to toxic substances, 68% of the sources of the news based only on one source were government representatives. With reference to news based on two sources, 51% of the sources came from the government and its representatives. As for the news based on three sources, the figure accounted for 36%. The frequency of citizens-based sources followed the opposite trend: 4% for news based on one source, 11% for news based on two sources, and 28% for news based on three or more sources.[70]

In the coverage of SARS by six journals of four countries, the WHO and the CDC played a crucial role both from the medical viewpoint and from that of the quality of information sources. Some reporters provided information published on the web sites of these bodies.[71] The WHO and the most developed Western countries played a fundamental role also in the scientific, technical and financial activities

related to the avian flu. Scientific and medical information coming from Vietnam and China tended to receive local and limited coverage.[72]

In the *JN* coverage of flu A/H1N1, international authorities like the WHO did not have significant importance in terms of frequency. The Health Ministry, the National Agency for Health Control and the Health Departments of several Brazilian states were the most frequent and relevant sources. As happens with science in general, official sources[73,74] prevailed in the news regarding medicine and health broadcast by television, mainly in the coverage of new and/or controversial topics – for instance, biotechnology.

If normally the TV news is widely based on a reduced number of institutional sources, in times of crisis sources like government authorities and representatives tend to become even more visible.[75] In addition, these sources are somehow obliged to speak, as they are in charge of public offices, with a considerable visibility and a direct responsibility to manage the crisis. Scientific journals, considered by several studies as part of the routine coverage of science, technology and medicine/health,[76] were not used as sources for the news on flu A/H1N1.

Conclusion

The *JN* covered flu A/H1N1, which emerged in 2009 and lasted for 20 weeks total, with two peaks: the first being supported by the emergency of the disease; the second being justified by the "re-emergency" during the Brazilian winter. Although the TV news gave considerable space to the issue, most news was short and condensed a large amount of information and images. The scientific knowledge was scarcely explored, even though it would have contributed to a better understanding by the public of the cause, the evolution, the virulence, and the virus potential to cause a severe pandemic, among other characteristics. Scientists were hardly present as sources or voices. Considering the significant attention given to the issue, specialists and science experts could have seized this opportunity to proactively get more space – which, at least in Brazil, did not take place.

The fear raised by international authorities that the virus A/H1N1 could be more lethal than the seasonal one was expressed by the *JN* coverage. Less evident was the fact that also common flu can be lethal. In this respect, *JN* failed to compare the new flu figures with those of the seasonal flu, which would have contributed to a reduction of panic on one hand, and enabled society to be on the alert for the common flu on the other. Instead, it contributed to create a scenario of panic by counting the number of deaths, illness cases or those only potentially affected – not always confirmed – or by highlighting individual suffering.

On some occasions *JN* tried not to throw the audience into a panic, for instance on May 7th. The TV presenter stated twice that there were no reasons for such panic. The coverage included also an interview with the Brazilian Health Minister, José Gomes Temporão, who declared that Brazil was ready to face the new flu A/H1N1. However, the emphasis on the increasing number of illness and death cases, together with images of people wearing masks – which marked the whole coverage of the disease – contributed to amplify the risks related to the new flu among the Brazilian population, and led some authors to define it a "pandemic of panic".

Of course, *JN* was not the only TV news or media in the world to make mistakes and exaggerations during the coverage of the 2009 pandemic flu, as it happened with other arising infections or previous health crises. On the contrary, these features were rather common in international media focusing the attention on a difficult question: how to alert the population about an arising virus – which widespread throughout all continents in just six weeks, whose genetic cause was not well-known and which seemed to be highly lethal – without generating panic?

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Notes and references

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