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WHAT GETS INTO THE MEDIA: THE CASE OF MEDIA BIAS IN VIETNAM DURING COVID-19

ABSTRACT

This study investigated the coverage of COVID-19 in Vietnam to understand what types of information can be published, how accurate it is, and if media bias exists. The results show that media biases are more clearly presented during the gathering and editing stages of news production. Although COVID-19 received a heightened frequency of reporting, news articles on this topic indicated the limited use of sources, provided mostly general information and statistics, and lacked scientific quality. These results are intended to provide public health authorities and news audiences with an understanding of how a health event is presented in the media.

Keywords: news writing, journalism, media bias, news production, scientific quality, health reporting, health communication, COVID-19, Vietnam

INTRODUCTION

Mass media influence our perceptions of health and health-related issues in a variety of ways. It is argued that media affects us by changing our perceptions of the world through prolonged exposure to reality portrayed through media content. The role of mass media is considered even more important during a global pandemic like COVID-19 (Furlan 2021; McCaw *et al*. 2014). Nowadays, false, unscientific, baseless, and unverified information spreads widely, disrupting the media environment, and causing confusion and panic among the public (Krawczyk *et al*. 2021). This panic, in turn, incites extreme behaviour, such as discrimination, hostility, or violence. These phenomena beg the question of how accurate, scientific, and verified information is reported in the mass media, and to what extent media bias is introduced to the public. This study investigated the news coverage of COVID-19 in Vietnam to understand what types of information could be published, how accurate the news could be, and if the coverage was affected by media biases.

LITERATURE REVIEW

Reliance on news during the pandemic

Pandemics are situations where communication needs and the thirst for information are particularly high. Accordingly, mass media play a fundamental role in creating awareness of a new health threat. The mass media and the work of trained journalists are even more important during a global health emergency, such as COVID-19, when misinformation on social media can spread as quickly as the virus itself, with false or misleading claims posing a serious risk to public health and public action (Thinley 2012; Brennen *et al*. 2020).

The first public knowledge of emerging infectious diseases (EIDs) often comes from the mass media (Sell *et al*. 2017). The mass media provides information from governments and health and public health organisations during the pandemic, making a significant impact on decision-making, and the implementation of actions to contain the outbreak and prevent further spread (Chipidza *et al*. 2021). News affects not only consumers or communities, but also healthcare professionals who rely on this information for their medical decisions (Cassels *et al*. 2003). The mass media has thus become an expected and intended component of the pandemic response, and an important channel of information for all audiences. Research findings in Australia (Lupton & Lewis 2021), New Zealand, the United Kingdom, the USA, Italy, South Korea (Browne 2020) and Vietnam (Ly-Le 2022) show that traditional media (television and radio) were important sources of COVID-19 information for the public, health professionals, governments, and stakeholders.

Scientific quality of news coverage

The scientific quality of health-related information in news articles, and especially articles about COVID-19, is questionable. For new drug or treatment information, an article should at least accurately describe the product's characteristics and its potential role in treatment, including the harms and benefits of the product, target groups, indications, and alternatives (Cassels *et al*. 2003). The purpose of such an article is to give readers a fair review of the new drug. Similarly, in the case of public health interventions, such as vaccinations, readers should be informed about the benefits and harms, costs and financial transparency between research groups or experts and the manufacturer (Moynihan *et al*. 2000). However, McCaw *et al*. (2014) provided evidence that the quality of health articles in newspapers tends to be poor. These authors evaluated 500 health articles published in US newspapers between 2006 and 2008 and found that 62% to 77% of the articles did not adequately address the costs, risks, benefits, or the quality of the alternatives when it came to healthcare-related products or procedures. Furthermore, some media tended to exaggerate the benefits and understated the risks when reporting on health interventions. This conclusion was supported by studies from Canada (Cassels *et al*. 2003), the USA (Moynihan *et al*. 2000; Slater *et al*. 2008), Europe (Mazur 2008) and Asia (Min *et al*. 2020; De Souza 2007). The results indicates that scientific information in the media was relatively one-sided and only emphasised certain aspects of the problem. This trend was also

repeated in Vietnam when news on COVID-19 was covered with large volumes, fast reporting speed, and biased information (Ly-Le 2022).

Media bias

What types of health-related information are published by the mass media, and what is the procedure of news production? According to Harcup and O'Neill (2017), unexpectedness, prominence, human interest, timeliness, and impact make up the news values. According to these values, information on pandemics, infectious diseases, or the latest treatment updates on incurable diseases potentially are newsworthy. However, previous studies have shown that even such information is not always reported in a complete, fair, or balanced manner.

News coverage is often influenced by the social, cultural, and economic factors in a region (Wright *et al*. 2013). For health-related news, Wright and colleagues (2013) aggregated results from previous studies and concluded that news stories often emphasise biomedical perspectives on health and wellness, as well as dominant cultural perspectives on health, while downplaying psychosocial issues and alternative perspectives. Min *et al*. (2020) agreed with the above assessment, stating that news coverage is usually more about treatment than about prevention, and often exaggerates the benefits of technological advances. In addition, media coverage tends to offer unrealistic expectations of a complete cure, with little mention of the costs, quality of evidence, potential risks, and alternative options (Cho 2006; De Souza 2007; Slater *et al*. 2008; Arroyave 2013; Min *et al*. 2020).

This study examined COVID-19 news coverage in Vietnam to understand the Vietnamese news production process of health-related news articles, their scientific quality, and whether media biases appeared. The research addressed the following research question:

RQ: How do media biases appear in COVID-19 news articles in Vietnam, if any?

Two sub-research questions were used to support the main research question:

RQ1: What does the production process of COVID-19 news articles in Vietnam entail?

RQ2: What is the scientific quality of COVID-19 news articles in Vietnam?

THEORETICAL UNDERPINNINGS

This study is guided by Park *et al*.'s (2009) model of causes of forms of media bias, and Oxman *et al*.'s (1993) index of scientific quality (ISQ) for health-related news reports. ISQ measures the applicability, opinions versus facts, validity, magnitude, precision, consistency, and consequences of the scientific information in a news article. It also assesses whether the presented information could be misleading for readers. This model has often been applied in research on health-related news (e.g., Hamborg *et al*. 2019; Hoffman & Justicz 2016). It provides a theoretical lens to explore media bias and the scientific quality of news coverage on health issues, and in this case, COVID-19. Figure 1 summarises how media outlets turn health events into news stories and what criteria are examined in this study.
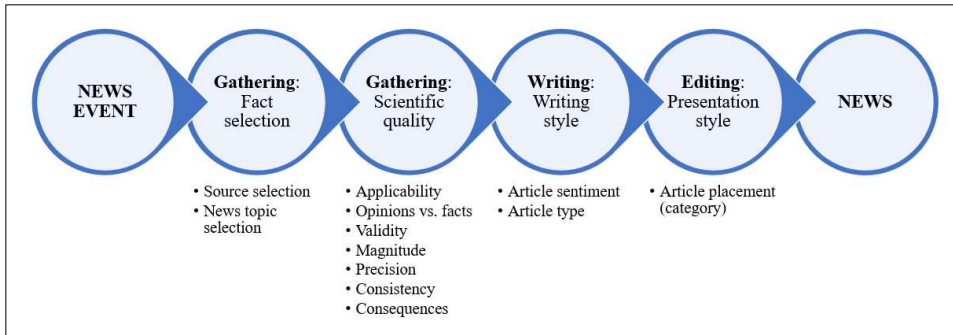
FIGURE 1: FORMS OF MEDIA BIAS INTRODUCED TO THE NEWS
PRODUCTION PROCESS

By applying Park *et al*.'s (2009) model, the author aims to understand how media bias could be introduced at each stage of the news production process. From a news event to a published news article, the information goes through three stages: gathering, writing, and editing. The gathering stage is when journalists select which facts from a news event to cover. As the focus of this study is COVID-19 news, the researcher skipped the event selection part and only paid attention to the source and news topic selections. For source selection, each sampled article was examined to see if it quoted an expert or scientific source, a government source, a business source, or a combination of these sources. For news topic selection, the articles were scanned to identify which topics (or themes) of the COVID-19 event the journalists chose to cover.

The researcher added one more aspect to the gathering stage, Oxman *et al*.'s (1993) ISQ. This index was chosen as it is the most validated tool to measure the scientific quality of health news articles (Hoffman & Justicz 2016), developed with inputs from 38 research methodologists and journalism academics. To understand if COVID-19 news in Vietnam was distorted or misreported in the news, the sampled articles in the present study were evaluated with the seven measurements of ISQ: applicability, opinions versus facts, validity, magnitude, precision, consistency, and consequences. Each measurement was assessed using a Likert scale of 1 to 5: 1 being an absence of that measurement or potentially misleading information, 5 being a clearly cited or adequately discussed scientific evidence, and 2-5 being partially reported.

In the second stage, the writing stage, biases could appear when journalists make the articles sound more positive or negative through labelling, word choice and tone (Park *et al*. 2009). In this study, the researcher analysed the writing style bias with the article's sentiment and type. The sentiment is defined by the positive, neutral, or negative tone of an article. As for the article type, the researcher investigated how the information was communicated, if the article was an informative piece, an analytical piece, or an opinion piece/review.

In the editing stage, biases could be introduced through the presentation style of the story, which includes the placement and size allocation (Park *et al*. 2009). While this study only dealt with online articles, where the size or length of an article is not limited (such as in print), the researcher omitted the analysis of the size and only focused on the article placement, or which category the article appeared in.

RESEARCH DESIGN

This study collected COVID-19 news articles from Vietnam's three largest and most prominent media agencies, Tuoi Tre, Thanh Nien, and VnExpress, over a period of three months from 20 June 2021 to 20 September 2021. This time frame concurs with the time the COVID-19 pandemic peaked in Vietnam, when the country experienced the highest community transmission stage (World Health Organisation 2021). The inclusion criterion was news articles related to COVID-19 updates, prevention, treatment, and related healthcare information. Articles with lists of names, obituaries, anecdotes, and articles that only mentioned COVID-19 as a time reference were omitted. A total of 887 articles fulfilled the criteria. Table 1 presents how each publication contributed to the sample.

TABLE 1:   NUMBER OF ARTICLES BY PUBLICATION

Publication	N	%
Tuoi Tre	293	33.0%
Thanh Nien	291	32.8%
VnExpress	303	34.2%
TOTAL	887	100.0%

Each sampled article was analysed, coded, and categorised by two coders. The coders performed the analysis and coding with an initial set of ten articles to agree on the description of each code type and category. This helped establish the coders' agreement before the actual coding started. The discrepancies were compared and adjusted with discussion. Krippendorff's alpha was used to determine the intercoder reliability. The accepted reliability scores were above 0.80.

RESULTS

To analyse the gathering stage, the author first analysed the source selection. Most analysed articles used political sources, quoting a government official, or reported information from a government report. Other sources used by the Vietnamese media included an expert (information from a healthcare professional, or professional research, or a report) and a business or a general audience source. About one-third of the sampled articles used more than one type of source, combining a political source with an expert source or other sources. The distribution of sources used in these news articles is shown in Table 2.

TABLE 2:   SOURCES USED IN NEWS ARTICLES.

Type	n	%
Expert source	262	29.5%
Political source	680	76.7%
Other source(s)	294	33.1%
Combined sources	299	33.7%

The articles were analysed thematically. The researcher found that the COVID-19 articles in Vietnam discussed a wide variety of topics. However, these topics were covered unevenly (see Table 3). Most of the articles covered general information on COVID-19. The general information included a compilation of breaking news, updates, and immediate information or comments on how COVID-19 impacted the economy and life, both domestically and internationally. Another prominent topic was statistical updates. These articles provided numerical figures of new cases, new recoveries, and deaths. Other topics found in the sampled articles were the latest research and developments, information on specific medical institutions or personnel, information on a specific technology or product, regional or national COVID-19-related policy or programmes, and personal stories related to the pandemic.

TABLE 3:   TOPICS OF NEWS ARTICLES

Topic	n	%
General information	455	51.3%
Latest R&D	16	1.8%
Specific medical institution/personnel	28	3.2%
Specific technology/product	35	3.9%
Statistics	209	23.6%
Regional/national policies/programmes	89	10.0%
Other	55	6.2%

Another aspect investigated in the gathering stage was the scientific quality of the articles. The author found that 192 out of the sampled 887 articles included at least one scientific measurement, accounting for 21.6%. Many of the articles did not make it clear to whom the information in the report applied, whether the information was supported by scientific evidence, how precise and consistent the data were, and the benefits and risks that should be considered. Even in the 192 articles that addressed the scientific measurements, the scientific quality was low, as they only covered each measurement partially. Table 4 below presents the scientific quality of these news articles. Figure 2 (also below) presents the Likert scale (1: not included or potentially

misleading to 5: adequately assessed) on how each quality is distributed on the scale and its mean value.

TABLE 4:   SCIENTIFIC QUALITY OF NEWS ARTICLES

Quality	No		Partial		Yes	
	N	**%**	**n**	**%**	**n**	**%**
Applicability	32	16.7%	79	41.1%	81	42.2%
Opinion vs. fact	16	8.3%	72	37.5%	104	54.2%
Validity	27	14.1%	124	64.6%	41	21.4%
Magnitude	34	17.7%	118	61.5%	40	20.8%
Precision	32	16.7%	117	60.9%	43	22.4%
Consistency	46	24.0%	104	54.2%	42	21.9%
Consequences	30	15.6%	94	49.0%	68	35.4%
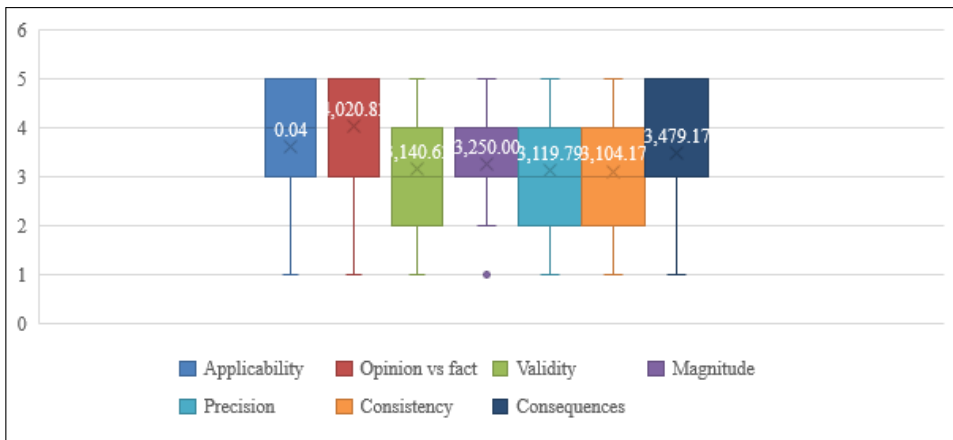
FIGURE 2: DISTRIBUTION AND MEAN VALUES OF THE SCIENTIFIC
QUALITIES OF NEWS ARTICLES

The applicability quality measures the level of clarity to whom the scientific findings apply. The opinion versus fact quality measures the level of clarity of whether facts are distinguished from opinions. The consequences quality measures how the benefits, risks and costs of the scientific findings are considered. The box plots of these three qualities have high interquartile ranges from 3 (partially assessed) to 5 (adequately assessed), showing that most articles discussed these aspects appropriately.

The validity quality measures the assessment of the credibility of the scientific evidence, while the precision quality measures the level of clarity, and the consistency quality measures how the scientific evidence between studies is considered. The box plots of these three qualities have interquartile ranges from 2 to 4 (partially assessed), showing that most articles discussed these aspects somewhat appropriately.

The magnitude quality, which measures the strength of the findings (effects, risks, or costs), has a comparatively short interquartile range from 3 to 4. It indicates a higher level of agreement of the quality scores, and that most articles assessed the magnitude of the findings at least partially.

However, as presented in Table 4 above, between 8.3% and 24% of the news articles that mentioned the scientific aspects of COVID-19 information did not adequately assess the findings. It could be inferred that the scientific quality of news articles in Vietnam was largely measured, but still unevenly. Some scientific measurements were omitted during the reporting process.

To analyse the writing stage, the researcher checked the sentiment and type of the sampled news articles. The sentiment analysis was conducted with a dictionary-based (to see whether the journalists used forward-looking or pessimistic or neutral vocabularies) and context-based (to see whether the article balanced optimistic and pessimistic information) approaches. Articles with an equal proportion of positive and negative sentiments were treated as neutral pieces. The analysis found that most of the articles fell into the neutral category (see Table 5 below). Among the non-neutral articles, there were more positive pieces than negative ones (120 positive articles compared to 49 negative articles).

TABLE 5:   SENTIMENTS OF NEWS ARTICLES

Sentiment	n	%
Positive	120	13.5%
Neutral	718	80.9%
Negative	49	5.5%

For article types, the researcher assessed how the information was communicated in the articles. Three codes were used: informational, analytical, and opinion/review. Informational articles provided facts and data on COVID-19, and summarised different points of view or statistical values, without detailed analysis or explanation. Analytical articles delved deeper into the topic with a causal analysis, interpretation of phenomena, or a recommendation and discussion based on factual information. Opinion/review articles were more subjective articles, with an individual's opinions or comments about the COVID-19 information. Most of the assessed articles were informational (see Table 6 below).

TABLE 6:   TYPES OF NEWS ARTICLES

Type	n	%
Informational	850	95.8%
Analysis	18	2.0%
Opinion/review	19	2.1%

For the editing stage, the researcher established where the articles were placed. It was found that healthcare and breaking news were the two most-placed categories, accounting for more than 80% of all articles in the sample (see Table 7 below). It is also worth noting that more than 90% of the analysed articles covered news and information in Vietnam. Only 79 articles (out of 887) reported COVID-19 news from other countries.

TABLE 7:   CATEGORIES OF NEWS ARTICLES

Category	n	%
Healthcare	412	46.4%
Breaking news	327	36.9%
World news	79	8.9%
Op-ed	11	1.2%
Life	13	1.5%
Business	6	0.7%
Law	5	0.6%
Science	7	0.8%
Others	27	3.0%

DISCUSSION

Key findings

To recap, the first sub-research question is, "What does the production process of COVID-19 news articles in Vietnam entail?" In the news gathering stage, journalists usually used political sources for their articles, and only one-third of the sampled articles used more than one type of source. In addition, during the analysed period, media coverage of the COVID-19 pandemic was more focused on presenting cold facts and information, lacking in-depth or critical analysis. Considering that the

pandemic was already distressing, the media delving into the number of cases, the number of deaths, and the limitations and shortcomings of pandemic prevention and control could magnify the public's fears and present risks to public health and actions.

Furthermore, in the writing stage, most of the articles were presented in a neutral tone and an informational manner. Besides pointing out the limitations of the public health agencies, the media rarely associated the consequences with an analysis of the causes or suggestions for solutions. This practice could make the news stories one-dimensional and superficial, leaving readers to interpret the information in their own way, and usually, these interpretations tended to induce even more fear and reduce their confidence in beating the pandemic.

In the editing stage, news stories on COVID-19 were mostly placed in the health and breaking news categories. While health is likely the top-of-mind category to look in for this type of news, the breaking news category label could add a more serious or at least urgent angle to the pandemic. It is worth noting that the 887 articles on COVID-19 in the three-month time frame from the three publications indicate an average of about three articles per day per publication. Of these, 327 breaking news articles implied that daily, on average, each publication considered one to two COVID-19 stories as the most important news, and added these to the most attention-grabbing, well-visited category, breaking news.

The media plays a key role in regulating public opinion and promoting social consensus, creating the motivation for pandemic prevention and control. In the context of the COVID-19 pandemic, which comprehensively and profoundly affected all areas of social life and every individual in society, journalists should have reported the information accurately, with the right frequency, and at the right time. A review of the news production process should have been in place to not only provide COVID-19 updates, but also fight mis- and disinformation and regulate public sensitivity.

In response to the second sub-research question, "What is the scientific quality of COVID-19 news articles in Vietnam?", the study found the scientific quality of COVID-19 news coverage in Vietnam to be inadequate. While 95.8% of the sampled articles were informational, of these only 21.6% covered some scientific information. Moreover, further analyses showed that all articles that did include scientific information, omitted one or more qualities. For each quality, 8.3% to 24% of the total number of articles did not provide sufficient information, and 37.5% to 64.6% only provided partial information. This lack of scientific reporting could pose risks to the dissemination of health-related guidance (Hoffman & Justicz 2016), as the pandemic risks could be overstated and the efficacy of the pandemic control, prevention and protection could be understated. The lack of trustworthy information from credible scientists or research could be seen in combination with the use of sources by Vietnamese reporters. A political source was used most frequently (76.7% of the analysed articles), followed by other sources (33.1%), and an expert source was least used (29.5%).

These findings agree with previous research (Moynihan *et al*. 2000; Slater *et al*. 2008; Mazur 2008; Min *et al*. 2020; Ly-Le 2022) that scientific information in some media is limited. As news media influence readers' perception, especially on health and health-related issues, they should devote more attention to scientific information and interpretation to reduce potential confusion or misunderstanding.

The main research question was: "How do the media biases appear in COVID-19 news articles in Vietnam, if any?". The results showed that media biases were more clearly presented in the gathering and editing stages. The results in the writing stage indicated more neutral sentiments and informational articles in the sample. Nonetheless, this was expected by the researcher as it is a regular media practice to strive for balanced, neutral pieces of news.

In the gathering stage, this study examined the source selection, the news topic selection, and the scientific quality of the articles. While source selection is necessary to avoid information overload, it can lead to misrepresentation (for example, if the media primarily refer to sources that support a single point of view). The selection of sources used in the sampled articles favoured political sources and used a single source in most of the articles. This practice could introduce media bias. Further, the media coverage of COVID-19 in Vietnam was biased toward general information and statistical figures. By frequently highlighting the numbers of new cases or deaths and downplaying the vaccination, drug or technological advances, the media might have delivered an unrealistic stance on the pandemic. The assessment of the scientific quality also revealed a lack of scientific evidence in almost 80% of the sampled articles. When an individual is exposed to too much information (information overload), it is less likely that the individual will be able to choose the correct information among many and, often, contradicting messages. The lack of scientific support left the readers on their own to decide which messages to trust, which could cause a spread of incorrect information, and inaccurate information processing and sharing among people.

In the editing stage, the placement and reporting frequency indicated the value the media agencies assigned to COVID-19 stories. The findings of this study showed the heightened frequency of the media's reporting on COVID-19 issues and the increased usage of such news in the breaking news category. These characteristics implied media bias when the presence of COVID-19 topics on the media agenda and the repetitive exposure of the audience could significantly increase the perceived importance related to the topic.

LIMITATIONS AND NEXT STEPS

The biases could be attributed to time frame of the study as the samples were drawn during the most severe wave of the pandemic. One would expect that earlier in the pandemic the gathering stage might have been less biased because journalists knew less about the pandemic and that the bias entered the gathering stage as journalists learnt more about the pandemic. Further studies could examine the news coverage during different periods to compare and assess whether the media biases were different.

This study only investigated the various stages of the news production process in Vietnam, the scientific qualities of the news articles, and the potential inclusion of media biases in the news based on the published media coverage. Further studies could be conducted to understand media practice from journalists' viewpoint, or to understand the audience's perceptions of such news from the readers' viewpoint. A similar study to this one could also be conducted in future to continue evaluating the media biases in current health-related coverage in Vietnam. Such studies could give insights into the practices that impact the quality of health information in the news.

CONCLUSIONS

Despite the limitations, this research provides insight into how COVID-19 information was treated by the Vietnamese media, how media biases were introduced to the news production process, and the scientific quality of Vietnamese news articles. These results are intended to provide both public health authorities and news audiences (the community) with an understanding of how a health event is presented in the media and to provide media agencies with a snapshot of their current health-related news reporting to see if they should improve their practice. More research is needed, however, to investigate media practice from the perspectives of journalists and the audience. Having a more diversified and more robust body of knowledge and academic research on media practice regarding health-related issues, in this case COVID-19, could serve news agencies and their stakeholders well as they could avoid the pitfalls, and adapt and improve the overall news quality in Vietnam.

ACKNOWLEDGEMENT

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