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CONTENTS

LEAD ARTICLE

Perception of environmental information materials by youth audiences: Results of a neuromarketing study

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Abstract

The paper presents the results of using eye-tracking technologies to study news materials on environmental topics collected as stimulus material and classified according to their impact on audience perception. The empirical material of the study came from news websites covering environmental issues. For objectivity, we compared two regional media resources – *74.ru* (Chelyabinsk) and *Aktobe Times*. We present our analysis of participants' response to the studied materials and the degree of their influence on the participants' emotional state and behavioral reactions. The paper also supplements the data obtained from content analysis in previous studies and expands the understanding of this issue. The chosen quantitative and qualitative approach to content research allowed us to determine the semantic and stylistic features of constructing ecotexts, determine their connotative characteristics, and classify them by groups, topics, and categories. The paper also contains survey data contributing to a deeper study of the stated problem and focusing on a detailed study of the audience's behavioral responses. The survey data allowed us to confirm the expressed hypotheses and highlight the active areas of interest of the youth readership.

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Alongside the presented conclusions and points of discussion, we expressed the main assumptions highlighting the features of the formation of environmental texts in the news media.

Keywords
Internet media, environmental issues, headline, eye tracker, youth audience.

Introduction
Environmental issues are particularly relevant in society and of primary importance for the economic development of territories losing their investment attractiveness due to unfavorable climates and environmental risk zones. The tools of information influence used by the media shape the audience's perception of the current environmental situation and significantly affect the social well-being of the population. We examined Chelyabinsk, Russia and Aktobe, Kazakhstan, since they are in the same territorial and economic zone and have similar ecological issues.

With the development of the Internet, over 85% of the national population[3] now has Internet access, including young people who actively consume information promoted by the media. Environmental issues are actively discussed online, and this media transparency has exposed certain environmental problems across Russia. At the same time, the populations of regions with a risky environmental situation are more sensitive to such information, since the modern media space sets certain stereotypes, forms a mass attitude towards the territory, and imposes stereotypes on environmentally risky regions.

Environmental issues are particularly acutely perceived by young people living in such high-risk regions since the Internet is their main source of information. Within the framework of the declared relevance and in hopes of developing our researcher in the future, we formulated the following hypotheses:
- Young people are mostly attracted by headlines rather than images;
- Symbiosis between the headline and the image evokes both positive and negative emotions on environmental issues, most often forming an indifferent or sharply negative attitude towards the information received;
- Excessive media pressure on environmental issues generates negative emotions and leads to a destructive perception of the objective environmental reality and the ecological situation by the youth audience.

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[3] https://tass.ru/obschestvo/12698757

The respondents in the study were students aged 18 to 20, who belong to generation Z. They are called 'zetas' in the Theory of Generations (Dimock, 2019). The authors of the Theory of Generations divided generations according to the principle of the heterogeneity of the shared values of people who live in the same country but grew up in different historical conditions. Each generation is given a unique name, the most common of which are Baby Boomers, Generation X, Generation Y, and Generation Z (Williams, 2011). One of the most popular activities among students is browsing the Internet (Kalinkin, 2019). Generation Z has unique characteristics and poses special requirements on the market of online services and digital technologies. Their basic requirements include the availability of information, comfortable in formation acquisition, online communication, independent choice of content, voice commands, acquiring user-friendly information in a minimized text form, with images, etc. (Leung, 2004).

We used eye-tracking, survey, and content analysis to test our hypotheses. The formulated hypotheses determined the further stages of our study.

Theoretical framework

In Russian literature, studies on environmental communications and environmental issues in the media deal mostly with the cultural aspect and environmental awareness (Ivanova, 2019). References to environmental culture in Russian society are presented as a condition for the formation of environmental awareness and behavior of the younger generation. It is also argued that ecolinguistics and metaphors play a special role in describing environmental issues (Ivanova, 2021). It is possible to find methodological and historiographic justifications for the formation of environmental themes in the media (Kalinina, 2016), including more fundamental approaches to modern methods of environmental education (Kolesova, 2016).

However, Russian scientific expertise is insufficient to fully understand the problem. It is necessary to study ideas and approaches in the field of communication from international researchers, including fundamental theories that formed the classical models of communication processes and the interaction between media and society. We began our search with the models and approaches that are closest to the mechanisms of interaction between the media and society.

The development of environmental issues and increased interest in media resources led us to choose the fundamental theory put forward by Gerhard Maletzke (1963), which is based on the concept of social communication

determined by several characteristics essential for perception. The advantage of the chosen model is the established chain of socio-psychological factors influencing the communicative process, which, in the context of environmental issues of the media, provides for a broader approach to understanding the levers and tools of media influence on the perception of the readership. Relying on Maletzke's model, we accepted the traditional elements of the communication processes (communicator (source), message, mediator and recipient) as key points of analysis and studied additional variables proposed within the framework of the model (*Figure 1*).

Figure 1

Gerhard Maletzke's communication model
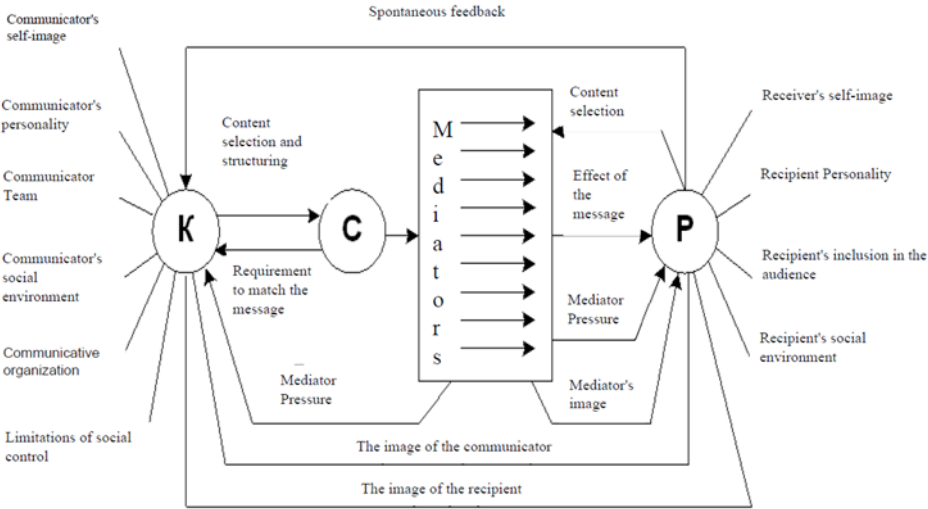
The variable of pressure was the most important in the content of this model. It allowed us to determine the nature of environmental texts in the media. Pressure shows that the media, as active intermediaries, shape the situation to increase the ratings of their materials, not thinking about their ultimate responsibility for the state of social well-being of the information recipient.

Following the ideas of Maletzke (1963), we agree that the most important semantic and ideological chain in environmental issues is the answers to the questions: What was said? Who was it said by? How was it said? To whom was it said? In this case, the third element of the message (How was it said?) is the most important in our study since these four elements create a field of communicative

dependencies. This is a special space created when the information is transferred from the communicant to the recipient when receiving feedback on the transmitted message. In the field of communicative dependencies, the environmental dependence originates from the communicator's view of the recipient. The media are guided by the task of enhancing emotional impact. Maletzke's explanation of the communication process using psychological factors is critical to us, since it has a subconscious but colossal effect on the audience's behavior. Environmental materials are filled with such effects. Theories of journalistic text focus on headlines, the main function of which is also to emotionally influence the audience to achieve a particular planned effect. Consequently, headlines can also exert pressure and act as a tool to influence the audience's behavioral responses.

In mass communication, where psychological effects are an integral factor, the message always reaches the recipient through one of the communication channels, and any of these channels modifies the recipient's perception and experience. Consequently, the effect of the message also changes. The media offer a large selection of messages, from which the readership chooses and is influenced by only a few. Notably, the symbiosis of the headline and the image evokes both positive and negative emotions in the audience regarding environmental problems, to a greater extent forming an attitude towards the information received. Then, under the influence of the media, the feedback breaks and becomes uncontrollable and spontaneous, often leaving impressions and stereotypes, which are difficult to get rid of.

Further review of the leading communication theories in the literature allowed us to find several provisions concordant with our hypotheses. We determined that the theory of cognitive dissonance of media influences on the audience and the perception of media information proposed by Leon Festinger (1957) is based on the idea that the media write 'selective' information, which attracts the reader's attention but causes dissonance from the available knowledge (generally favorable on the environmental situation) and the presented information due to the strong pressure of negative facts. A complex model of the media's use of informational influence generates dissonance; pressure can be increased by images and headlines forming the cognitive field. Walter Lippmann's theory of stereotypes (Lippmann, 1916) was persuasive in our research. Lippmann noted that human cognitive capabilities are limited: a person cannot know everything or be totally informed, since the environment is a too complicated and changeable structure. Overcoming the diversity of the world, individuals systematize knowledge about it into various semantic categories. According to

Lippmann, stereotypes initially arise spontaneously due to the 'inevitable need to economize attention'; they contribute to the formation of traditions and habits. The media form a pseudo-ecological environment in the reader's mind, which could be spontaneously shaped by a series of environmental publications and form a stable negative stereotype. The media use stereotypes, which give rise to negative identification of territories.

The concept of Jurgen Habermas (1981) allows us to justify the choice and differentiation of environmental issues, in which we established semantic variations to be used in our content analysis and survey. According to the presented theory, there are three types of acts in communication – constative, expressive and regulatory. The first act makes claims to reality (knowledge, intelligence), the second – to subjective truthfulness (sincerity, feelings, emotions), the third – to correctness (justification) from the standpoint of the normative social order (action). Actions can be rationally disputed from the standpoint of communicative rationality. The media exert a certain influence on the reader's consciousness:

- forming knowledge,
- forming an attitude,
- forming an action/response to the information received.

This relationship allows us to design material based on the principles of knowledge/knowledge, knowledge/attitude, knowledge/action.

In addition to the fundamental theories of mass communications and their current understandings and interpretations, also in regard to young audiences (Aduloju, 2020; Gureeva, Samorodova, Kuznetsova, 2020; Gureeva, Dunas, Muronets, 2021), more and more new scientific viewpoints on neuromarketing technologies in communications are emerging. Eye-tracking has been studied by Russian scientists such as Artemyeva (2021) and Yarosh (2019) who paid attention to the technical issues of conducting and organizing conditions for neuromarketing research, describe the requirements for the operation of iTracking equipment. In addition, attention to the influence of the media on the perception of young people is devoted in the works of foreign scientists Allan, Adam, Carter, and several other experts in the field of mass media communications, who study the impact of environmental risks and man-made consequences covered in the media. The authors of this study complement the paradigm of the established scientific direction with the expansion of iTracking techniques by survey and content analysis based on an interdisciplinary approach.

Methods

In total, 97 students of South Ural State University aged 18 to 22 years (29 young men, 68 young women) participated in our study. Participants were recruited on a voluntary basis, did not receive monetary remuneration, and gave their informed consent to participate in the study. After the eye-tracking study, all 97 respondents completed a survey in a Google form.

The stimulus material was selected and agreed upon through collegiate discussion among our team. The initial stage in selecting the stimulus material was content analysis of public and commercial news sites from Chelyabinsk (Russian Federation) and Aktobe (Republic of Kazakhstan), which are considered regions of 'risk' due to their environmental problems. Stimulus material was selected with consideration of the influence of the issues of environmental content and geographical classification. The time period of Kazakh and Russian sites used for our analysis was determined by a review of publications in 2019 and 2021, as 85% of the information agenda in 2020 was devoted to the topic of COVID-19 pandemic.

The content was grouped into three topics: waste, water, and air. Portions of screenshot of news sites were shown to participants, as eye tracker programs cannot be used to view web pages within a browser.

We selected the news sites of two regions – the Chelyabinsk region of the Russian Federation and Aktobe, Kazakhstan – for the objectivity of our study. Screenshots were taken from *74.ru* and *Aktobe Times*. We reviewed over three hundred news articles and videos from the sites, choosing 150 items from each country (Russia, Kazakhstan). We searched for the articles using the keywords 'ecological issues' and 'ecology'. We were aware that the respondents would be significantly affected by materials from the South Ural site, which is popular among the respondents in this region. However, we believed that content from *Aktobe Times* could also attract attention with its novelty and different means of presenting information, which had also to be taken into account for our study.

The stimulus material, as mentioned above, was divided into three blocks of environmental issues: water quality, air quality, and waste disposal and recycling. Each group consisted of twelve randomly chosen articles which included graphic and textual materials (headlines and subheadings) and logos of cross-media resources (social media). Within these blocks, we distinguished subtopics of environmental issues (*Table 1*).

<div align="right">*Table 1*</div>

Subtopics of environmental issues in the Internet media

Topical unit	Subtopic
Air	Pipe cleaning, vehicle exhaust, smoke from fires, unfavorable meteorological conditions, smell from illegal dump sites, stench from emissions
Water	Removing algae from bodies of water, water pollution by emissions, poisoned water, death of fish in water, drying out of canals, removing tires from bodies of water, development of the area near reservoirs
Waste	Unauthorized dump sites, volunteer clean-ups, waste reclamation, separation of waste, creation of landfills, unsanitary conditions near garbage zones, absence of trash cans in the streets and courtyards

The selected information resources have three areas of influence: 1) they form knowledge, 2) they encourage action, 3) they cause reflection in the form of emotional responses to the information received. The stimulus materials were grouped according to these areas, then, a survey was formed based on this principle.

The materials reflecting a particular problem and the reasons for its appearance were placed in the problem-problem category, which is aimed at expanding knowledge and ideas about certain phenomenon, i.e., affecting the cognitive resources of the information media consumers. Materials encouraging action on and solution of an environmental problem were placed in the problem-solution category, which includes a behavioral principle, i.e., the audience's behavioral approach, where the key task is not passive presentation of the material, but a call for specific action.

The materials aimed at the audience's affective (sensory-emotional) responses were placed in the category of problem-reflection. The main task of this stimulus material is to cause emotional responses from information media consumers. Such negative reactions as fear, anxiety, emotional stress, irritation are also noted. Eye-tracking studies record the movement of the respondent's eyes and demonstrate the degree to which they fixate on a particular content area; however, eye-tracking tools do not work with 'meaning' or mechanisms of evaluative action. Therefore, to determine negative stimuli (or rather, the textual and visual content of stimuli) in our further content analysis, we were guided by the Ecological Dictionary (Ekologia, 2020), which defines words with

negative connotation as threat words. The survey conducted immediately after the eye-tracking study contained a block of questions asking respondents to describe the feelings and emotions they experienced after viewing the stimulus material.

**The relationship between the categorical distribution
of the environmental material and the main theoretical approaches
of theories of mass communication**

Information material category	Aspect of influence on the audience's consciousness
Problem-problem	Cognitive
Problem-solution	Behavioral
Problem-reflection	Affective (emotional)

Next, we carried out a quantitative analysis to determine the frequency at which environmental issues were mentioned in the selected materials (*Table 3*).

**The frequency of mentioning environmental issues
in the chosen materials, by categories**

Category	Media resource	Air	Water	Waste
Problem-problem	*74.ru*	11	16	24
	1obl.ru	7	10	11
	timeskz.kz	3	8	10
Problem-solution	*74.ru*	9	14	18
	1obl.ru	7	6	10
	timeskz.kz	4	3	8
Problem-reflection	*74.ru*	23	16	19
	1obl.ru	8	5	10
	timeskz.kz	3	2	9
Total mentions per categories		75	80	119
Total number of all mentions		274		

The content of each of the presented stimuli is shown in *Table 1*. The characteristics of the verbal components of the stimuli will be considered separately through content analysis.

The eye-tracking study was conducted using an Eye Tribe Tracker (hereinafter referred to as eye tracker), a commercial product for desktop computers and tables allowing one to control the user's vision. The eye tracker has a small hardware module (20cm x 1.9cm x 1.9cm, 70 grams) which connects using a USB 3.0 port (integrated with iMotions).

The chosen eye tracker is compatible with iMotions version 8.2.4, which is eye-tracking software able to determine where a person is looking based on information extracted from the person's face and eyes. The eye tracker device uses a camera to track the movement of the user's eyes. The camera tracks even the smallest movements of the users' pupils by capturing images and running them through computer vision algorithms (NPR, 2012). The algorithms read the 'coordinates of the eye on the screen' and can help the program to determine where the user is looking. The algorithms also work with a camera sensor and special lighting to improve the interaction with the user in various conditions (Etherington, 2020). The eye tracker must be calibrated to be able to detect the user's pupils and determine the unique eye characteristics. This is necessary to improve the eye-tracking accuracy.

The eye tracker has an average accuracy of about 0.5 degrees of vision angle and can identify and track the eye movement with millimeter precision. The eye coordinates are calculated relative to the screen the person is looking at and are represented by a pair of coordinates (x, y) set in the coordinate system of the screen. The eye tracker primarily works through hardware detection of: a) the center of the pupil; b) the reflection of the cornea in the form of a small bright flare. Eye tracking systems track, process, and demonstrate the trajectory of eye movements between different fixation points (saccades), then demonstrate heat maps with the highest frequency fixation zones (shown as bright red) and the lowest frequency zones (changing from yellow to blue with decreasing frequency). We recorded the heat maps of particular attention zones: headline, text, and image.

We used a fixed eye tracker for our study. The study was carried out under electrically-screened dim lighting, in a specially equipped noise-insulated room (laboratory) with grey walls. The laboratory was fitted with two tables opposite each other and two computers. The participant sat at one of the tables. The eye tracker was installed under the computer screen opposite the participant. The study participant was approximately 60 cm away from the screen and tracker. This distance is necessary to eliminate the 'head movement compensation error' effect. The calibration was carried out using a point moving randomly across the monitor screen. Readings and the dependence of eye movements were adjusted

accordingly. The stimulus materials were then demonstrated on the screen. According to the conditions of the study, the participants should not wear glasses or any other items which could create glare and distort the results of the study.

The information received from the eye tracker was recorded in OGAMA for further processing and interpretation. The eye-tracking study took into account both visual data – a comparison of the respondent's behavioral strategies according to their level of attention by superimposing the tracking results on the stimulus images – and statistical data, demonstrating the number of fixations, the duration of each fixation, and the total fixation time in the areas of interest. The most fixed zones were determined by analyzing the degree of eye movement and the heat maps of each participant by superimposing (combining) the results of all the participants. The initial image shown to each participant was a cross in the center of a gray background. Then, the stimulus materials and the cross were demonstrated in turn. This is necessary for all the stimulus materials to be in equal starting conditions and have equal starting opportunities to influence the participant (*Table 4*).

Table 4

Description of the stimulus material

CODE	WATER		
	Headline	**Image**	**Description**
Ex.1 (S2)	Drilling of a new well began in the village of Shumaki, Korkinsky district, after mercury was discovered in the water / problem – solution https://www.1obl.ru/news/o-lyudyakh/v-derevne-shumaki-korkinskogo-rayona-posle-obnaruzheniya-rtuti-v-vode-nachali-burit-novuyu-skvazhinu/	Positive (a bird drinking water)	The material deals with the problems of water quality in settlements; the image has a central object (a bird) in the foreground and a blurred solid green background. The problem itself is not shown.

Ex.2 (S4)	How long does Fershampenuaz have to live without treatment facilities? / problem-problem. https://www.1obl.ru/news/o-lyudyakh/skolko-fershampenuazu-zhit-bez-ochistnykh-sooruzheniy/	Positive (image of water)	The material deals with the problems of water quality in settlements; the image shows water reservoirs. The problem itself is not shown.
Ex.3 (S6)	A contractor was chosen in Chelyabinsk to clean up the Miass river / problem-solution https://www.1obl.ru/news/ekonomika/v-chelyabinske-vybrali-podryadchika-dlya-ochistki-reki-miass/	Negative (a polluted reservoir)	The material deals with the problems of reservoirs in settlements. A close-up shows the problem (a polluted river).
Ex.4 (S26)	We cannot see the banks: unexpected paths to the Miass River will be cleaned in Chelyabinsk / problem-solution https://74.ru/text/gorod/2020/08/05/69403411/	Negative (a polluted bank)	The material deals with the problems of reservoirs and their surroundings in settlements. A close-up shows the problem (contaminated area near the river).
Ex.5 (S28)	Fish in the Miass River in Chelyabinsk could have died due to a sewer leak / problem-emotion https://www.kommersant.ru/doc/3981489	Negative (dead fish in the reservoir)	The material deals with the problems of reservoirs and their surroundings in settlements. A close-up shows the problem (dead fish).

Ex.6 (S30)	The person in charge of the state of Turgoyak was asked to resign after the Minister of Ecology arrived at the lake / problem – solution https://74.ru/text/gorod/2019/07/24/66172381/	Neutral (a reservoir, people on the shore)	The material deals with the problems of reservoirs, which are critical environmental, recreational, and health-improving natural objects. The image provides a general view of the administrative review process.
CODE	*Aktobe Times* newspaper – aktobetimes@list.ru		
Ex.7 (S38)	Boron and chromium will be cleaned up. The Ministry of Ecology considers cleaning the waters of the Ilek River / problem-solution https://timeskz.kz/75272-ochistyat-ot-bora-i-hroma-v-minekologii-zadumalis-ob-ochistke-vod-reki-ilek.html	Neutral (a natural landscape with the reservoir)	The material deals with the problems of natural reservoirs and the issues of cleaning rivers. The image shows the river outside the countryside.
Ex.8 (S40)	A local ecological catastrophe is brewing in the Aktobe region / problem-problem https://timeskz.kz/45115-ekologicheskaya-katastrofa-mestnogo-masshtaba-nazrevaet-v-aktyubinskoy-oblasti.html	Neutral (a natural landscape with the reservoir)	The material deals with the problems of natural reservoirs and the issues of cleaning rivers. The image shows a river outside the countryside landscape with a silhouette (shadow) of a person in the foreground on the left.
Ex.9 (S42)	Akbulak is afraid of the consequences of wastewater treatment at Aksu Ferroalloys Plant / problem-problem http://aktobetimes.kz/7627-akbulak-boitsya-posledstviy-ot-ochistki-stokov-na-azf.html	Neutral (a water storage and purification device)	The material deals with the problems of water quality in settlements; the image shows water reservoirs. The problem itself is not shown.

Ex.10 (S44)	The guilty were fined 17 million tenges for violations on the rivers in Aktobe / problem-solution https://t.me/s/ pressaktobe?before=433	Neutral (natural landscape with a reservoir and cargo vehicles)	The material deals with the problems of reservoirs and their surroundings, the problem is shown in close-up (deformed space near the river).
Ex.11 (S46)	'We need to save Shalkar and the lake right now!' / problem-solution https://timeskz.kz/61633-spasat-gorod-shalkar-i-ozero-nuzhno-uzhe-seychas.html	Negative (a desert dry landscape)	The material deals with the problems of reservoirs, which are critical environmental, recreational, and health-improving natural objects. The image shows a reservoir and its surrounding area.
Ex.12 (S48)	Akimat has not answered to scientists demanding to save the waters of Kokzhide / problem-problem https://timeskz.kz/60247-akimat-tak-i-ne-dal-otveta-uchenym-trebuyuschim-spasti-vody-kokzhide.html	Neutral (sand, trees)	The material deals with the problems of reservoirs, which are critical environmental, recreational, and health-improving natural objects. The reservoir itself is not shown in the image. The image is a sandy landscape outside of town.
WASTE			
CODE	*74.ru* online media – https://74.ru		
Ex.13 (S8)	The paths in the Chelyabinsk forest will be covered with chopped brushwood after the 'Big Cleaning' / problem-solution https://www.1obl.ru/news/o-lyudyakh/v-chelyabinskom-boru-otsypyat-dorozhki-izmelchennym-valezhnikom-posle-aktsii-gen-uborka/	Positive (a person cleaning up natural waste)	The material deals with the problems of waste in the forested area of the city. The close-up image shows a person cleaning up the area.

Ex.14 (S10)	Natalya Kotova demanded that garbage bags be removed from the streets of Chelyabinsk / problem-solution https://www.1obl.ru/news/o-lyudyakh/natalya-kotova-potrebovala-ot-svoikh-zamov-vyvezti-meshki-s-musorom-s-ulits-chelyabinska/	Negative (garbage bags)	The material deals with the problems of garbage (waste) in settlements. A close-up shows the problem – black garbage bags.
Ex.15 (S12)	'Store in a bag for three days': Chelyabinsk residents were told how to properly dispose of medical masks / problem-solution https://www.1obl.ru/news/o-lyudyakh/khranit-v-pakete-tri-dnya-chelyabintsam-rasskazali-kak-pravilno-utilizirovat-meditsinskie-maski/	Negative (a thrown used mask)	The material deals with the problems of waste in cities (in particular, the problem of disposing single-use masks). A close-up shows the problem – a mask on the pavement.
Ex.16 (S32)	'People believed that I would succeed': the story of a schoolboy who fights against landfills alone / problem – solution https://nesorim.ru/lyudi-poverili-chto-u-menya-vsyo-poluchitsya-istoriya-shkolnika-kotoryiy-v-odinochku-boretsya-so-svalkami/	Positive (a child against the background of the forest)	The material deals with the problem of waste – positive content highlighting the involvement in solving the problem of waste. The image shows a forested area with the subject of the material – a young boy – in the center.
Ex.17 (S34)	Residents of the suburbs of Chelyabinsk sounded the alarm because of the plans to expand the landfill / problem-problem https://74.ru/text/ecology/2020/10/16/69507259/	Negative (a room with construction waste)	The material deals with the problems of landfills. The image shows the problem – piles of garbage.

Ex.18 (S36)	It was proposed to layout an arboretum at Chelyabinsk landfill. Let us show what is there now (you will be surprised) / problem-solution https://74.ru/text/ecology/2020/09/03/69454881/	Neutral (a natural landscape with cargo vehicles)	The material deals with the problems of landfills. The image shows the solution to the problem – reclamation of the landfill, namely, construction at the site of the landfill.
Aktobe Times newspaper – aktobetimes@list.ru			
Ex.19 (S62)	'Mercury poisons Aktobe'. Containers with hazardous waste did not undergo maintenance for a year and a half / problem-problem https://timeskz.kz/70305-rtut-otravlyaet-aktobe-poltora-goda-ne-obsluzhivalis-konteynery-s-opasnymi-othodami.html	Neutral (an iron orange container)	The material deals with the problems with the maintenance of hazardous waste containers. A close-up shows the source of the problem – a container of mercury.
Ex.20 (S64)	Tons of hazardous waste in Aktobe industrial zone continue to poison nature / problem-problem https://timeskz.kz/71689-tonny-opasnyh-othodov-v-promzone-aktobe-prodolzhayut-otravlyat-prirodu.html	Negative (a pile of waste in bags)	The material deals with the problems of landfills with hazardous toxic waste. A close-up demonstrates the source of the problem – a pile of waste bags.
Ex.21 (S66)	'Let's say no to waste!' A large-scale campaign to eliminate illegal dumping sites has started in Aktobe / problem-solution https://timeskz.kz/69171-skazhem-musoru-net-masshtabnaya-kompaniya-po-likvidacii-stihiynyh-svalok-planiruetsya-v-aktobe.html	Negative (a waste landfill)	The material deals with the problems of illegal dumping sites. The image shows the problem – an illegal dumping site, although the material itself covers a campaign to eliminate illegal dumping sites.

Ex.22 (S68)	The liquidation of illegal dumping sites has been delayed / problem-problem http://aktobetimes.kz/novosti/7781-likvidaciya-stihiynyh-svalok-zatyanulas.html	Neutral (operating equipment)	The material deals with illegal dumping sites. The image shows the solution to the problem – the disposal of illegal dumping sites, although the material itself covers the campaign to eliminate illegal dumping sites.
Ex.23 (S70)	The city needs a new landfill / problem-solution https://timeskz.kz/72295-gorodu-nuzhen-novyy-musornyy-poligon.html	Positive (a sprout)	The material deals with landfills. A close-up demonstrates the problem – a pile of household waste with a green sprout in the foreground.
Ex.24 (S72)	No new areas will be allocated for the solid waste landfill / problem – problem http://aktobetimes.kz/novosti/7791-dlya-poligona-tbo-ne-vydelyat-novyh-ploschadey.html	Neutral (operating equipment)	The material deals solid waste landfills. The problem is shown in the image – trucks with garbage (solid waste) are shown in front of landfills.
AIR			
74.ru online media – https://74.ru			

Ex.25 (S14)	Chelyabinsk enterprises almost doubled their investments in the environment / problem-solution https://www.1obl.ru/news/ekonomika/predpriyatiya-chelyabinskoy-oblasti-pochti-v-dva-raza-uvelichili-investitsii-v-ekologiyu-/	Negative (smoking plant pipes)	The material deals with the problems of air. Although the headline conveys positive news – reducing emissions, the image demonstrates the problem – close-ups of smoking pipes. The photo is processed with color filters.
Ex.26 (S16)	Smoke from forest fires is observed in Chelyabinsk region / problem-problem https://www.1obl.ru/news/o-lyudyakh/v-chelyabinskoy-oblasti-nablyudaetsya-zadymlenie-ot-lesnykh-pozharov/	Neutral (an urban landscape)	The material deals with the problems of air. The general plan (plan view) shows a smoky city caused by forest fires.
Ex.27 (S18)	'Overheated and spoiled': experts covered up for the environmental reputation of Chelyabinsk region / problem-solution https://www.1obl.ru/news/o-lyudyakh/peregretaya-i-isporchennaya-eksperty-zastupilis-za-ekologicheskuyu-reputatsiyu-chelyabinskoy-oblasti/	Negative (a smoky country landscape)	The material deals with the problems of air in the region and the environmental reputation of the region. The image shows the problem – the countryside with smoking pipes in the background.
Ex.28 (S20)	A radiation fog was formed in Chelyabinsk for several days. Let us look at the photos making our eyes welling up with tears / problem-emotion https://74.ru/text/ecology/2020/12/02/69594391/	Negative (a smoky urban landscape)	The material deals with the problems of air in the city. The image shows the problem – the urban landscape shrouded in fog, with pipes actively smoking on the horizon.

Ex.29 (S22)	The Federal Service for Hydrometeorology and Environmental Monitoring announced that the air in Magnitogorsk has become cleaner. What is the situation in Chelyabinsk? / problem-solution https://74.ru/text/ecology/2021/03/19/69820565/	Negative (a smoky urban landscape)	The material deals with the problems of air in the city. The image shows the problem – the urban landscape shrouded in fog, with pipes actively smoking on the horizon.
Ex.30 (S24)	Texler told when Chelyabinsk will stop choking with emissions / problem-solution https://74.ru/text/ecology/2020/12/23/69651076/	Negative (a choky urban landscape)	The material deals with the problems of air in the city. The image shows the problem – the urban landscape shrouded in fog, with pipes actively smoking on the horizon.
Aktobe Times newspaper – aktobetimes@list.ru			
Ex.31 (S50)	'We're not the only ones belching smoke'. This is how Aksu Ferroalloys Plant management comments on the problem of air pollution in Aktobe / problem-problem https://timeskz.kz/78221-dymim-ne-tolko-my-tak-rukovodstvo-azf-kommentiruet-problemu-zagryazneniya-vozduha-v-aktobe.html	Neutral (a country landscape)	The material deals with the problems of air in the region. A close-up shows a cargo vehicle against the backdrop of a country landscape, with smoking pipes in the background.
Ex.32 (S52)	Citizens were poisoned with hydrogen sulfide 59 times a week / problem-emotion https://timeskz.kz/70612-59-raz-za-nedelyu-gorozhan-travili-serovodorodom.html	Neutral (person in a mask)	The material deals with the problems of air in the city. The medium plan depicts the city demonstrating the problem – air pollution of the urban environment, with the central object in the foreground (a woman in a mask).

Ex.33 (S54)	When will the stench leave Aktobe? / problem-emotion https://timeskz. kz/77800-parlament-moldavii-ukrepil-prava-russkoyazychnogo-naseleniya-prinyav-rezonansnye-zakony.html	Negative (smoke, a person covering the face)	The material deals with the problems of air in the city. The close-up view demonstrates the problem of polluted air, namely, a woman covering her face with a handkerchief against a background of smoke.
Ex.34 (S56)	The main source of the stench in Aktobe will be eliminated next year / problem-solution https://arnap. kz/article/5f352fedb3fdb40560c0 a4c7	Negative (smoke, a person in a gas mask)	The material deals with the problems of air in the city. The close-up view demonstrates the problem of polluted air, namely, a man in a gas mask on the right, against the backdrop of a smoky landscape.
Ex.35 (S58)	Clean air in Aktobe is delayed by years / problem-problem https:// timeskz.kz/72533-chistyy-vozduh-v-aktobe-otkladyvaetsya-na-gody.html	Negative (a person in a protective suit and a gas mask)	The material deals with the problems of air in the city. The close-up view demonstrates the problem of polluted air, namely, a man in a gas mask against a smoky landscape, with a clean country landscape with blue skies and green grass on the right (in contrast).

Ex.36 (S60)	What was saving the city from the stench before, and why it is not done now / problem-problem https://timeskz.kz/70870-chto-spasalo-gorod-ot-zlovoniya-ranshe-i-pochemu-etogo-ne-delayut-seychas.html	Negative (smoke, a person in a gas mask)	The material deals with the problems of air in the city. A close-up view demonstrates the problem of polluted air, namely, a man in a gas mask in the center, against a smoky landscape.

After the eye-tracking study, we obtained data on the eye movements and fixations of each study participant with heat maps demonstrating the most fixated zones in the above-specified areas of interest. The data was exported to a software suite for analysis. In this case, we calculated the time of complete fixation, the number of fixations, and the average fixation duration for each stimulus on the headline, text, and image.

We conducted a survey among participants immediately after the eye-tracking study. The survey included three closed-ended questions for each stimulus. The first question was aimed at studying the degree of attention to particular elements of the presented stimulus. The second question was aimed at identifying the emotional response to the presented stimuli. The third question determined the participant's desire to undertake actions in response to the presented information (stimuli). The goal of the main group of questions was to identify the most significant aspects (elements) of the viewed materials – the attractiveness of the text, images, and understanding of the content, which represented the cognitive and affective levels. The survey also included a block responsible for the analysis of the behavioral level, expressed in responses related to the desire/unwillingness to display a certain activity.

Results
Eye-tracking study results

We compared the total fixation time by the areas of interest, namely the fixation time on the text area and the image area. We estimated both the time of fixation on the stimulus in general (total) and on its separate areas. All the stimulus examples have a text area and an image area. According to the eye-tracking study, the total fixation time was significantly longer on the text areas (*Figure 2*).

Total fixation time (ms)
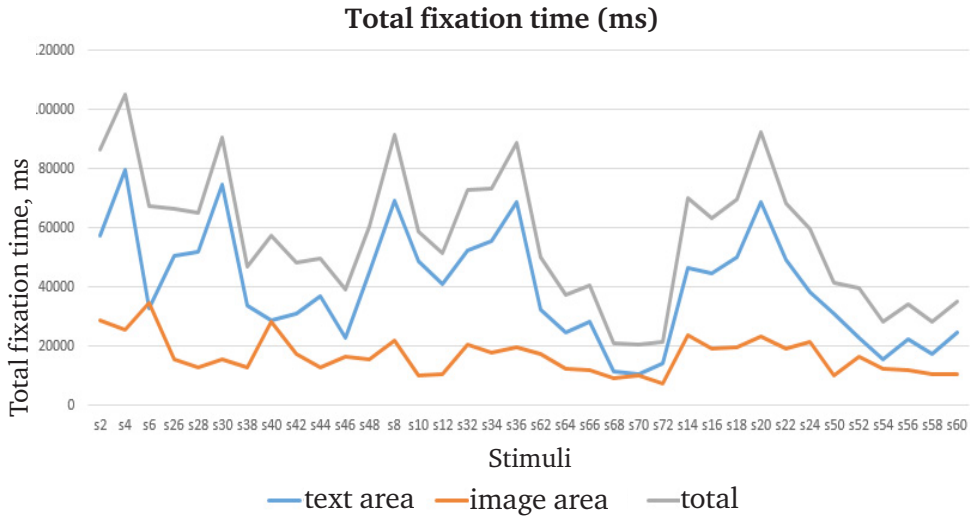
Table 5

Distribution of the stimuli by topics and regions

Water		Waste		Air	
Chelyabinsk	Kazakhstan	Chelyabinsk	Kazakhstan	Chelyabinsk	Kazakhstan
s2, s4, s6, s26, s28, s30	s38, s40, s42, s44, s46, s48	s8, s10, s12, s32, s34, s36	s62, s64, s66, s68, s70, s72	s14, s16, s18, s20, s22, s24	s50, s52, s54, s56, s58, s60

We see that the largest number of fixations was on the text area. We can use statistical methods to extrapolate the obtained data to other similar environmental materials covering water, air, and waste issues. An analysis of the respondents' reactions to the stimuli allowed us to highlight the most attractive stimuli in terms of the fixation time on the text and image areas. There were also stimuli which showed top results for both text and image areas. We took into account the topic of each stimulus when summing up the analysis of the eye-tracking study (*Table 6*).

Table 6

Areas of interest with the longest fixation (top three)

Category	Topic	Text area / ms			Image area / ms		
		Air	Water	Waste	Air	Water	Waste
Problem – problem		31079 ms 'We're not the only ones belching smoke'. This is how Aksu Ferroalloys Plant management commented on air pollution in Aktobe / problem – problem – stimulus 31 (S 50)	79758 ms 'How long does Fershampenuaz have to live without treatment facilities?' / problem –problem – stimulus 2 (S4)	55395 ms 'Residents of the suburbs of Chelya-binsk sounded the alarm because of the plans to expand the landfill' / problem – problem – stimulus 17 (S 34)	19051 ms 'There is smoke from forest fires in the Chelya binsk region'/ problem – problem – stimulus 26 (S 16)	28447 ms 'A local environmental disaster is becoming imminent in the Aktobe region' / problem –problem – stimulus 8 (S40)	18018 ms 'Residents of the suburbs of Chelya-binsk sounded the alarm because of the plans to expand the landfill' / problem – problem – stimulus 17 (S 34)

Problem–solution	49204 ms	74699 ms	68908 ms	23583 ms	34620 ms	21874 ms
	'The Federal Service for Hydrometeorology and Environmental Monitoring announced that the air in Magnitogorsk has become cleaner. What is the situation in Chelyabinsk?' / problem – solution – stimulus 29 (S 22)	'The person in charge of the state of Turgoyak was asked to resign after the Minister of Ecology arrived at the lake' / problem – solution – stimulus 6 (S30)	'Arboretum proposed at Chelyabinsk landfill. Let us show what is there now (you'll be surprised)' / problem – solution – stimulus 18 (S 36)	'Chelyabinsk enterprises almost doubled their environmental investments' / problem – solution – stimulus 25 (S14)	A contractor was chosen to clean up the Miass River in Chelyabinsk' / problem-solution – stimulus 3 (S6)	'Paths in the Chelyabinsk forest will be covered with chopped brushwood after the Big Cleaning project' / problem – solution – stimulus 13 (S8)
					28972 ms 'Drilling of a new well began in the village of Shumaki, Korkinsky district, after mercury was discovered in the water' / problem – solution – stimulus 1 (S2)	

Problem–emotion	68693 ms	52021 ms	The topic is not covered in this category.	23472 ms	13012 ms	The topic is not covered in this category
	'Radiation fog formed in Chelya-binsk for several days. Let's look at the photos which made our eyes well up with tears' / problem –emotion – stimulus 28 (S20)	'Fish in the Miass River in Chelya-binsk may have died due to a sewer leak' / problem – emotion – stimulus 5 (S 28)		'Radiation fog formed in Chelya-binsk for several days. Let's look at the photos which made our eyes well up with tears' / problem – emotion – stimulus 28 (S20)	'Fish in the Miass River in Chelyabinsk may have died due to a sewer leak' / problem – emotion – stimulus 5 (S28)	

According to the results of the eye-tracking study, the evident leader in fixation time on the text area was Stimulus 2 (79.758 milliseconds (ms)), entitled 'How long does Fershampenuaz have to live without treatment facilities?' The article dealt with the problem of water quality in settlements; maximum fixation time was on place name Fershampenuaz.

Notably, this stimulus is also among the leaders (top three) in terms of the fixation time on the image area and has the highest rates by the total fixation time (total) – 105301 ms. This is displayed in the heat map of the stimulus (*Figure 3*). Example 6 showed the second longest fixation time on the text area (74699 ms). The article 'The person responsible for the state of Turgoyak was asked to resign after the Minister of Ecology arrived at the lake' discussed reservoir inspection activities and further dismissal of the leading official. However, in terms of fixation time on the image area and the total fixation time (total), it ranked roughly in the middle, as displayed in the heat map (*Figure 4)*.

Figure 3

Heat map of stimulus 2

Figure 4

Heat map of stimulus 6
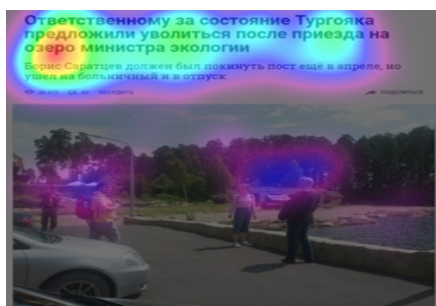
The next highest results in fixation time on the text area were shown by Stimulus 28 (68693 ms) – 'Radiation fog formed in Chelyabinsk for several days. Let's look at the photos which made our eyes well up with tears'. The maximum fixation time was on the phrase 'radiation fog'. At the same time, this stimulus also showed some of the strongest results in fixation time on the image and in total fixation time (total) – 92165 ms, which is also shown by the heat map of this stimulus (*Figure 5*).

Figure 5

Heat map of stimulus 28

We can conclude that examples 2, 6, and 28 related to water and air problems attracted the maximum attention of this particular group of respondents. At the same time, the graphics were a semantic continuation of the text. To analyze the results of the eye-tracking study, we chose the six stimuli with the longest fixation time (*Table 5*). Apart from the top-three best performing stimuli, examples 25 and 18 also demonstrated long fixation time for the text area (69399 ms and 68908 ms, respectively). These materials dealt with combating emissions and waste collection in settlements and landfill reclamation.

The best results in fixation time on the image was recorded for Stimulus 3 (34620 ms), which depicts a river and a cleaning machine, i.e., the cleaning of the reservoir (*Figure 6*). The next best results in fixation time were shown by Stimulus 1 (28972 ms), which shows a bird drinking water (Figure 7). Stimulus 8 (28447 ms), which has similar indicators, also deals with the problems of water purity (*Figure 8*). The figures below show the heat maps of these stimuli, the images of which had the longest fixations.

Heat map of stimulus 3

Heat map of stimulus 1
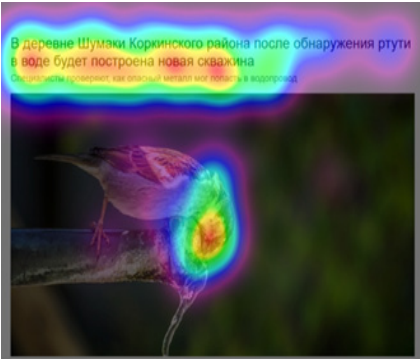
Heat map of stimulus 8
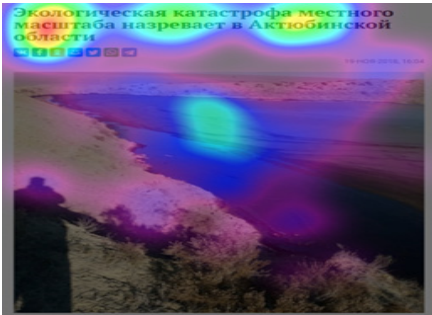
Stimulus 25, which discusses air pollution and shows smoking pipes, also showed some of the best results in fixation time. There is a group of stimuli, which demonstrates a low number of fixations both in terms of the individual elements (text and image) and overall. Stimulus 24 (problem-problem) is a good example of this, having low level of image fixation time (7433 ms). Stimulus 24 is dedicated to waste problems and shows trucks with garbage (solid waste) in front of a landfill. This stimulus also had some of the lowest numbers of fixations on the text. Stimulus 23 (problem-solution) also had a low number of fixations on the text (10621 ms). It also deals with waste problems, landfills in particular, showing a closer image of the issue – a pile of household waste with a green sprout in the foreground. The image of this stimulus also had low fixation times. Based on a qualitative analysis of recorded fixation times, we determined which area of interest, category, and topic had the best results. The longest fixation times were recorded for the text areas; the problem-solution category; and the topic of water, respectively. The topics of air and water had greater fixation times than waste. The lowest fixation times were recorded for stimuli discussing waste issues in the problem-problem and problem-solution categories.

Results

Immediately following the eye-tracking procedure, students were asked to answer questions on their perception of the viewed content to identify their retention and evaluation of the presented material. When creating the survey, we referred to the population's environmental behavior in the region. The questions can be conditionally divided into three blocks; the first block has a cognitive component and is aimed at identifying primary and secondary elements of the media text in the perception of information. The second block of questions defines the affective component through emotional assessment of the object and the response of the subject to the proposed stimulus material. The third block of questions has a conative component and is aimed at identifying behavioral attitudes and the respondents' readiness to undertake certain actions as a response to environmental material.

The first block of questions identified the participants' attention to the structural elements of the presented stimulus. Participants were asked to determine what they primarily paid attention to when looking at the stimulus material: headline, subheading, image (photo), other elements (icons, likes, views, diagrams, graphs, etc.). The stimulus material had a complete and clear composition. Visual hierarchy, which is related to the ratio of the text and image, is important in the layout of the content. Most of the respondents answered

that the headline attracted their attention primarily. This was confirmed by the results of the eye-tracking study. The participants paid little attention to details (icons, likes, comments, etc.) in the structural composition. This was confirmed by the survey data and the results of the eye-tracking study, as seen in the graphs (*Figure 9*).

Areas of attention identified by participants

-Other elements (icons, likes, views, etc.)   -Image (photo)   -Subheading   -Headline
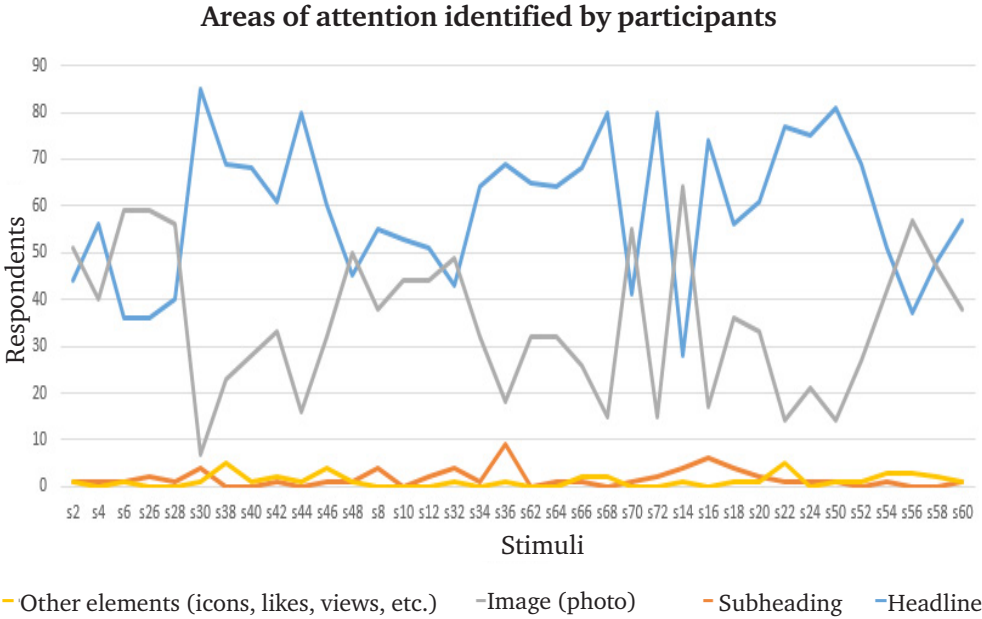
The obtained data correlate well with other studies indicating that information is processed 'top-down'. The headlines which attracted the most attention include: 'The person in charge of the condition of Turgoyak was asked to resign after the Minister of Ecology arrived at the lake' (S30 – stimulus 6; 80% of the respondents); 'No new areas will be allocated for the solid waste landfill', 'Removal of illegal dump sites dragged on' (S72 – stimulus 24 and S68 – stimulus 22; 78% of respondents); 'The guilty were fined 17 million tenges for violations on the rivers in Aktobe' (S44 – stimulus 10; 78% of the respondents).

Most of the headlines that attracted the subjects' attention are in the problem-solution category and use a behavioral approach and/or calls to action; this may be explained by the fact that visual information is processed faster than textual information. We should also take into account the factor of familiarity: smoking pipes and landfills are the most common photos in the regional mass media.

The goal of the second block of questions was to establish the participants' emotional reactions to the presented materials on a scale (negative to positive). Emotional responses are short-term and have a different degree of manifestation based on the stimulus (in this case, environmental issues presented in the media). In this block, we aimed to determine the participants' immediate, general evaluation of the stimuli on a scale.

The subjects were offered the following scale of emotions: fear, anxiety, excitement, hostility, disinterest, indifference, hope, and tranquility.

Fear, as the strongest emotion, is considered negative and connected with an internal feeling of impeding or perceived threat. This emotion was mainly indicated to mark the strongest negative emotion and identify less strong but also negatively colored emotions against its background. The next suggested negative emotion was anxiety. The concepts of fear and anxiety are not synonymous, but can be used interchangeably when it comes to situational anxiety and feeling unsafe. The next suggested emotion was excitement. Excitement is an expectation that something will happen or might happen. It can be both pleasant and disturbing. According to the survey of the students, anxiety was the most common scale of negative emotions. Participants indicated anxiety on the emotional scale in response to the following stimuli: 'Smoking from forest fires is observed in the Chelyabinsk region' (showing a birds eye view of a smoky city) (S16 – stimulus 26; 47% of the respondents); 'Fish in the Miass River in Chelyabinsk may have died due to a sewer break' (showing a close-up of dead fish in the river) (S28 – stimulus 5; 32% of the respondents); 'Tons of hazardous waste in the industrial zone of Aktobe continue to poison nature' (showing a close-up image of trash bags) (S64 – stimulus 20;31% of the respondents). The headlines and images show possible and existing threats to health and safety.

The neutral emotions on the scale, such as disinterest and indifference, are connected with a lack of emotions to the proposed stimuli. Indifference was one of the most common emotions expressed in the respondents' answers.

The following materials evoked a neutral response in the majority of the respondents: 'Store in a bag for three days: Chelyabinsk residents were told how to properly dispose of medical masks' (showing a close-up of a used, thrown away mask) (S12 – stimulus 15; 37% of respondents); 'Texler told when Chelyabinsk will stop choking with emissions' (showing a close-up of a smoky urban landscape) (S24 – stimulus 30; 49% of respondents); 'Akbulak is afraid of the consequences of wastewater treatment at Aksu Ferroalloys Plant' (showing water storage and treatment equipment) (S42 – stimulus 9; 30% of

respondents). This emotion is usually associated with the neutral connotation of eco-materials. The positive end of the emotional scale includes such emotions as hope and tranquility. Hope is opposed to fear, anxiety, and excitement, and is related to inspiration and expecting changes for the better.

Tranquility is associated with peace and harmony, and the absence of external irritants. Several stimulus materials inspire hope, including the undisputed leaders: 'People believed that I would succeed': the story of a schoolboy who struggles with landfills alone' (showing a child in front of a forest) (S32 – stimulus 16; 57% of the respondents); 'We cannot see the banks: unexpected paths to the Miass River will be cleaned in Chelyabinsk' (showing a polluted area near the river) (S26 – stimulus 4; 52% of respondents); 'The person in charge of the state of Turgoyak was asked to resign after the Minister of Ecology arrived at the lake' (showing authorities inspecting the site) (S30 – stimulus 6; 30% of respondents). Headlines and images with a positive or neutral connotation offer hope.

When evaluating the emotional scale of perceiving environmental information, we should note the diverse palette of emotions from negative (anxiety), neutral (indifference), to positive (hope). First of all, we should take into account a certain connotation of the headline and image.

The third block of questions was related to the subjects' behavioral attitudes, the purpose of which was to find out if the environmental texts and images affect the subjects' desire to take action. The proposed variants of behavioral attitudes reflected a diverse range of behavior regarding environmental issues, from active participation to lack thereof.

The range of behavioral attitudes offered in the last block of the survey reflected different reactions to the stimulus material. Most of the subjects showed indifference in their answers–the viewed stimulus material did not lead to a desire to do anything (which is clearly demonstrated by the graphs in *Figure 10*).

Behavioral attitudes demonstrated as a response to the stimulus material
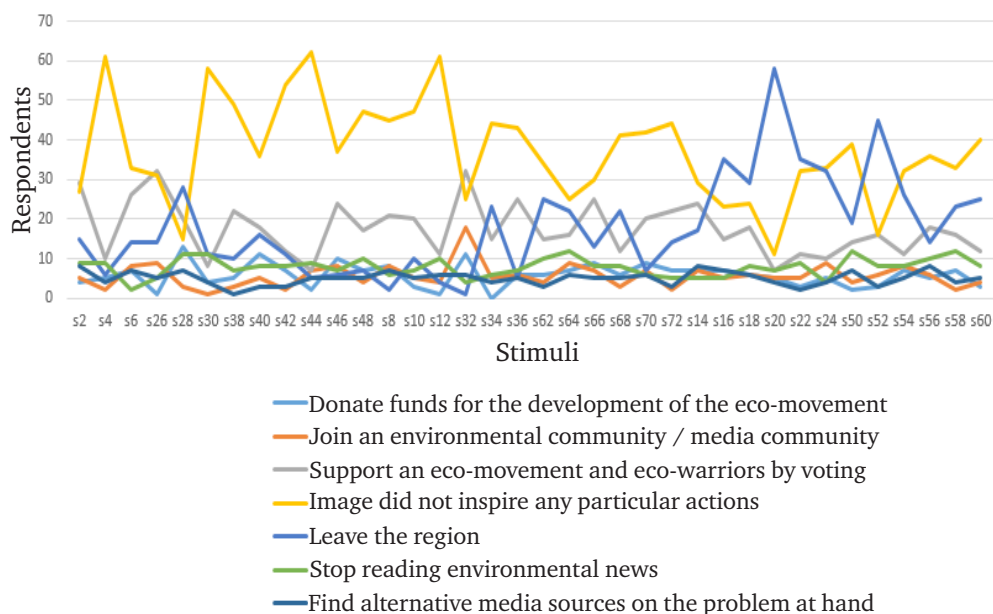
The following stimulus materials were the leaders in the survey:

1. Leader among the headlines: stimulus 6 (S30) 'The person in charge of the state of Turgoyak was asked to resign after the Minister of Ecology arrived at the lake'

2. Leader on the emotional scale:

a) anxiety – stimulus 26 (S16) 'Smoke from forest fires is observed in Chelyabinsk region';

b) indifference – stimulus 30 (S24) 'Texler stated when Chelyabinsk will stop choking with emissions';

c) hope – stimulus 16 (S32) 'People believed that I could do it: the story of a schoolboy who fights against landfills alone'. The survey data coincide with the results of the eye-tracking study.

The survey data coincide with the results of the eye-tracking study.

Content analysis results

We studied the accounts of Chelyabinsk Internet media which publish information on environmental studies (*74.ru* and *First Regional TV Channel* of the Chelyabinsk Region – *1obl.ru*). In particular, we investigated ecotexts as a cognitive-affective stimulus forming responses and behaviors among readers.

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We began our structural content analysis by selecting ecotexts from *74.ru* and *1obl.ru*. We studied all publications for 2019–2021. Over 200 informational materials were identified in this initial step. Next, we applied simple random selection to this initial batch of materials. Analysis of these materials allowed us to identify regularities and features of how environmental information is presented in these Internet resources.

Next, we analyzed the desired impact of the information materials on the audience. We based our analysis on the theoretical concepts and prerequisites of the theories of mass communications, which we presented earlier in this paper. We found that all the information resources have three areas of influence: 1) they form knowledge, 2) they encourage action, 3) they evoke reflection in the form of emotional responses to the information received.

Next, we carried out a quantitative analysis of the frequency at which environmental issues were mentioned in the materials of the studied Internet resources. We found that information in the problem-emotion and problem-problem categories prevails on *74.ru* website; there was nearly twice as much material in the problem-emotion category than on *1obl.ru*. Problem-solution is more often associated with the topic of air and waste than with water. On *1obl.ru*, problem-emotion was the most frequent category; this category of texts was mostly neutral.

The next stage of the content analysis was the study of the stylistic focus of the ecotexts, which aimed to familiarize the readership with environmental issues. We examined the overall tone and connotation of the ecotexts presented to the audience (*Table 7*).

Table 7

Connotations of the environmental content

Category	Media resource / Content connotations	Air (-)	Air (0)	Air (+)	Water (-)	Water (0)	Water (+)	Waste (-)	Waste (0)	Waste (+)
Problem-problem	*74.ru*	■			■				■	
	OTV/ 1obl.ru		■		■					■
Problem-solution	*74.ru*	■				■		■		
	OTV/ 1obl.ru		■				■			■
Problem-emotion	*74.ru*	■			■			■		
	OTV/ 1obl.ru		■	■		■	■		■	■

Notably, the materials on .ru in the problem-problem category, which deal with the topics of air and water, had a predominately negative connotation; the material is expressive and accusatory, there are references to expert opinion confirming the depth and systemic nature of the problem, which requires immediate solution.

On *1obl.ru*, the materials in the problem-problem category dealing with air and water have mostly neutral connotation. The materials provide factual information reflecting real events and measures taken on the identified problems. The topic of waste is reflected in a positive light; *1obl.ru* covers the possibilities of solving the problem and explores the options and methods to avoid the problem and its consequences.

Materials in the problem-solution category from *74.ru* on the topic of air and waste have a negative connotation; the materials include information on the authorities' failure to act and insufficient measures to solve pressing environmental problems. The topic of water is presented in a neutral connotation; *74.ru* presents information on events that have already taken place, reflecting measures taken by citizens and authorities to solve the unfavorable environmental situation.

On *1obl.ru*, the materials discussing water quality are neutral in the problem-solution category, establishing specific facts and events on attempts to solve existing issues. The issues of air and waste are presented in a positive light and the materials provide information on the prospects and opportunities for solving current problems preventing them in the future. The texts are presented as an appeal or address to the public with calls to participate in the existing events and projects.

On *74.ru*, texts on all of the environmental topics were marked by a negative connotation in the problem-emotion category, with a predominance of rhetorical questions about the future of the region, including stylistically reduced vocabulary and exclamatory-interrogative sentences in the headlines. On *1obl.ru*, texts in the problem-emotion category present the entire range of environmental issues in neutral and positive aspects; positive connotation prevails, reflecting significant achievements in solving environmental problems.

In general, the overall style of the content from *74.ru* dealing with the environmental problems of the region has a more negative and emotional nature; the website focuses on pressure points and the uncertainty of the response to the problem in the distant future. The overall style of the content on *1obl.ru* has a generally more productive nature of information materials focusing on achievements, opportunities, and specific prospects of solving environmental problems.

Our analysis showed that when creating and forming ecotexts, headlines, and lead paragraphs, *74.ru* frequently use parts of speech typical of a stylistically reduced vocabulary with pejorative and negative connotations (*Table 8*).

<div align="right">Table 8</div>

Words from headlines and main text of materials from *74.ru* and *1obl.ru* with a negative connotation

Parts of speech	Examples of words in headlines
Noun	Stuffiness, stench, stink, smog, mercury, fires, shortage, catastrophe, problem, fetor, liquidation, industrial area
Adjective	Dead, radiative, disturbed, guilty, polluted, dangerous
Verb	Suffocate, dispose of, shed tears, fight, think, be afraid of, escape, poisoned, leave
Adverb	Unexpectedly, alone, arduous, difficult

Word forms derived from the verb 'to poison' are most frequently used in headlines. Semantic variations of these word forms are found in almost every second headline: poison, poisoned, being poisoned, got poisoned, poisonous, etc.

The structural content analysis showed that online media uses all variations of text manipulations in environmental texts: terms, symbols, images, facts, events, names, place names, public organizations, etc.

Conclusions

Our pilot study of environmental materials and their influence on young people's perception confirmed our hypotheses. Our first hypothesis was that headlines attract the most attention of the youth audience rather than the accompanying images. This was confirmed by using eye-tracking equipment, survey, and content analysis. We revealed that the text attracted more attention than the image; specific headlines, including complex place names and words with a negative connotation, attracted special attention in particular. In some cases, the images also attracted a great deal of attention; the respondents actively reacted to the images of living objects and images with pronounced environmental problems.

In the eye-tracking study there were stimuli with the same fixation time on both image and text – Stimulus 3 (S6) – a person in a river skimmer; Stimulus 8 (S40) – a human shadow in front of a reservoir; Stimulus 23 (S70) – a plant

in front of a pile of garbage. The text areas in the same stimuli (Stimuli 3, 8, 23) demonstrated the lowest level of fixation time. These stimuli had single-line headlines carrying information which is neutral for the respondents. The materials which showed the longest fixation time during eye-tracking showed leading results both in the text area and in the image area, where the text and the image are in harmony and complement each other. This also confirms the second hypothesis to some extent.

Our second hypothesis was that the symbiosis of the headline and the image can cause both positive and negative emotions on environmental problems, to a greater extent forming an indifferent or sharply negative attitude towards the information received. This was confirmed by the results of the survey and the content analysis. The survey allowed us to confirm that media pressure has unpredictable effects, which manifest in the audience's social interaction. The conative-behavioral component showed low motivational activity and unwillingness to get involved in solving environmental problems. Environmental materials cause cognitive dissonance and negatively affect the social well-being of society, which has an extremely undesirable effect on the image of the region.

Our third hypothesis was that excessive media pressure on environmental issues generates negative emotions and leads a destructive perception of the objective reality of the environment and the ecological situation among youth readership. This was also confirmed. We see that lexical expression created by words with reduced stylistic coloring and the semantic dominant of 'environmental threat' creates a negative impression and forms a stereotypical perception of the ecotext. The media dictate the situation to increase their ratings while moving away from objective information. Within our content analysis, we established that the headlines attract the greatest deal of attention they follow certain standard patterns of composition and are always present in such materials. Attention is drawn to the images with complex or unfamiliar (atypical for an average person) objects. Rather than motivate the readership to take action, most of the stimuli unfortunately contribute to desires to 'leave the region' or 'disregard solving environmental problems'.

Thus, media coverage of environmental issues in the regions of environmental risk zones revealed excessive pressure on the youth audience. At the same time, the analyzed information materials do not increase the social responsibility and self-awareness of young people, but rather cause an indifferent attitude. Headlines also exert pressure; however, they do not achieve the initial goal of encouraging young people to actively respond to environmental issues, but rather create indifference and a negative response.

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ARTICLES

Headlines and misinformation in the Nigerian newspapers: Evidence from herder-farmer crisis and ENDSARS protests[1]

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Abstract

The increase in media proliferation as a result of the emergence of social media as alternative sources of news dissemination and consumption has led to many changes in journalism, such as declining gatekeeping and content scrutiny. Thus, headline construction and structuring play a crucial role in this new era of news. Like their counterparts all over the world, Nigeria's mainstream media are not left out of this raging redefinition of news construction and distribution in a hyperbolic and propagandistic format, despite their significant contributions to democracy since its return in 1999. The rise of insecurity and the attendance of political uproars, buoyed by online misinformation through pluralistic digital media, triggers intentional or inadvertent mistakes among the hitherto respected and credible mainstream media causing the need to respond to the salient issues in the media spaces without being out of the mainstream. Using the content

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analysis and process tracing methods, this paper explores the influence of the current media agenda on the gatekeeping of news that is increasingly spreading misinformation via clickbait on the headlines of the mainstream media.

Keywords

Headlines, mainstream media, misinformation, clickbait, framing.

Introduction

The news media proliferation as a result of the emergence of social media as alternative sources of news dissemination and consumption, has resulted in a series of positive and negative changes to professional journalism (Lunga & Mthembu, 2019; Pennycook & Rand, 2019). While social media allow freedom of expression, which is hallmarked by the growth of citizen journalism and the rebirth of press freedom in professional journalism, it has also led to declining of control, content scrutiny, and censorship, which is considered to be contributory to the massive spread of misleading information. Scholars have submitted to the fact that misinformation is an 'unintentional behaviour that inadvertently misleads' (Chadwick & Vaccari, 2019); a key crisis in the information ecosystem of contemporary time (Effron & Raj, 2020); the existence of 'alternative facts' and 'post-truth' phenomenon, resulting into a world with an abundance of lies where the truth is no more of the priority of societal communication (Tsfati et al., 2020). The information pollution syndrome consisting of misinformation, disinformation (intended misleading information), or fake news (a news article that is intentionally and verifiably false (Shu et al., 2017; Simons & Manoilo, 2021), has become a contested concept. However, the focus of the current study is misinformation construed as misleading information disguising itself as legitimate in the headlines of the mainstream media.

Advancement in technologies and media proliferation, resulting in unbridled competition, has made headlines a key element of information dissemination for both the mainstream media and citizen journalists making them susceptible to disseminating sharable and clickable content linked to the main articles (Lagerwerf & Govaert, 2021). However, the use and functioning of headlines in the mainstream and other media have also changed in one way or another (Lagerwerf & Govaert, 2021), as Kuiken et al. (2017) submitted that the function of a headline was initially to give a newspaper reader a glimpse and clear overview of an article. These scholars further argued that contemporary headlines could go beyond the news requiring vigilance on the part of the readers in order to maintain a healthy information ecosystem.

With the changes that are redefining mainstream media activities, positively and negatively, and the spike of information pollution worldwide, the mainstream media in Nigeria are not staying aside from their role in shaping society. Today, the current level of unrest, due to ethnic, religious and political crises in Nigeria, is of great concern with the media happen to be playing a crucial role as a major source of information on the conflicts (Apuke & Omar, 2021). While misinformation has been described as a catalyst for the crisis in information systems across the world, through politics and other volatile issues in society, data on media reports on conflicts in Nigeria, particularly the herder-farmer crisis, depict biased newspaper coverage that tends to demonize a set of ethnic groups with minimal if any consideration for the possibility of inciting other ethnic groups against those who are demonized (Apuke & Omar, 2021). Suffice to say that the herder-farmer conflict is not the only national issue threatening Nigeria's unity and peaceful coexistence. The nation has been witnessing other crises, including secession agitations by various ethno-regional groups, which usually makes headlines from national, regional and local daily newspapers, giving them their inherent newsworthiness.

Statement of the problem

Previous research has revealed the power of headlines, how they have been used to bait readers and how they can be easily susceptible to misinformation (Munger et al., 2020). Previously, before the domination and popularity of misinformation in news media, Molek-Kozakowska (2013) examined how sensationalism was used to cause ambiguity 'through specific illocutions, semantic macrostructures, narrative formulas, evaluation parameters, and interpersonal and textual devices' in news media, and they further set a framework for a language-oriented analysis of sensationalism in news media. Studies have also been carried out on the level of audience confidence in news headlines; how features of news headlines affect the accuracy of audience perception, how newspaper headlines are often interpreted and how journalists are further provided with tips on how to determine what to report (Blom, 2018; Smelter & Calvillo, 2019; Conklin, 2020). However, in the case of Nigeria, there is little if any existing literature on the role of mainstream media as a contributor to the crises and conflicts in the country through the dissemination of misinformation in headlines. Extant literature documents how media can be biased in their reports (Usigbe & Ilo, 2019), and how misinformation can be linked to headlines and news content through some features they may carry (Chiluwa & Chiluwa, 2020). For instance, Chiluwa & Chiluwa (2020) found that the constructions of the conflict and the main actors in the Nigerian press

are highly sensational, divisive and dangerous. From the literature, it is obvious that misinformation through mainstream newspapers headlines has not been investigated. Thus, the current study is aimed to supplement the literature by examining whether the mainstream media do spread misinformation via clickbait function in their headline structure.

Literature review
Headlines as a key instrument of newspapers

The significance of news headlines in mainstream and new media is incontrovertible (Ecker et al., 2014), as they present facts which influence readers' attitudes (Roy et al., 2019) and provide an opportunity to discern the overall content of articles and their desirability (Ecker et al., 2014). Ecker, et al. (2014) further noted that headlines provide context, help with comprehension and interpretation of content by activating the readers' relevant background knowledge, thus easing the meaning of the news (Bonyadi & Samuel, 2013). As the rapid change and advancement in technologies affect media production, much of newspaper content is consumed online rather than directly from the print forms (Kuiken et al., 2017). This shift also comes with more diverse challenges for mainstream media to meet up with competitors and deliver to their readers. Among these challenges are economic incentives (Olyneux & Coddington, 2020), pressure for meeting up with needs in sharing breaking news, and effective usage of advanced technologies.

There are many key characteristics of headlines that make them more attractive to readers. According to Roy et al. (2019), the use of verbs is a key characteristic of headlines, while others believe that the writer uses strong words as an objective norm to attract readers. According to Dor (2003), appropriate headlines should have such properties as shortness, clarity, ease of understanding, unambiguity, interest, novelty, and a design that is not confusing to readers, connecting the story with the known facts, events, expectation and assumptions. They show that headlines should not only bait the readers, but also offer them tangible information in line with their expectations of responsible media. However, the contemporary post-truth media ecology is changing the golden rules of the headline construction, as this important component of news is not a victim of information pollution like other parts of the news stories.

From informative to clickbait headlines

As technologies change many aspects of journalism and news production, it has a great effect on some key areas such as headlines. Headlines, due to their

unique features, remain one of the most effective tools in the news production of today. According to Dor (2003) and Molyneux & Coddington (2020), despite all the changes that has occurred in news production, headlines have maintained many of their characteristics except for two that remain unchanged: 'clear and unambiguous', and the position that headlines should stand alone in summarizing the entire article without any accompanying words. In other words, these two areas have been heavily affected and used negatively, which makes it possible to question the key roles of headlines in the first place, which expose many to clickbait.

Causes for spreading misinformation through online newspaper headlines

Most mainstream media make mistakes or are deliberately involved in it thinking that using the clickbait strategy is another new norm in journalism to meet the expectations of digital media, with the intention of using it to generate revenue or win the competition in the market. When in reality most of the features of clickbait strategies are things that go against the standard practice of journalism and can easily make the headlines susceptible to misinformation for two key reasons; they may be used mistakenly to convey misleading information to readers; or some readers with bad intentions can use and translate them for their personal gain. It is for this reason that the mainstream media cannot and should never compromise ethics, no matter what.

Looking at the changes in the headline formulation, one may ask whether clickbait and newsworthiness have become synonymous. Of course, there are some key similarities between the two but the differences are enormous. For example, Kuiken et al. (2017) note 'simplification, spectacularization, negativity, and provoking content' as some of the key characteristics of clickbait; and economic incentives (either monitory, minimization of word or information) to attract readers and stay up in competition is linked to the reason for using clickbait instead of creating newsworthiness by using certain techniques.

Metrics for clickbait

The role of these metrics for online journalism is significant, as they have become determining factors in news production. Decisions are less based on instinct and more on actual data in attempting to attract more readers to their stories, editors and journalists have been changing the way they write headlines for their articles, by using words, phrases, and stylistic techniques that are known to perform well and attract more clicks (Kuiken et al., 2017). Questions

and figures have also been found associated with clickbait headlines and signal words such as 'this', 'why' or 'what' as features of clickbait (Kuiken et al., 2017).

Empirical review

A number of previous studies have exclusively been conducted with the intent of revealing how news media misinform the public through their news reports. These studies largely used experimental surveys with the aim of establishing the accuracy of the reports within the context of fake news (Molek-Kozakowska, 2013; Blom, 2018; Effron & Raj, 2019; Chiluwa & Chiluwa, 2020; Pennycook et al., 2020). When the media reported fake news, studies have shown how the readers intended to spread such reports, though they did not have the ability and capability of determining the truthfulness of the reports through social networking sites (Efron & Raj, 2019; Pennycook et al., 2020). Efron & Raj (2019) found that 'encountering misinformation makes it seem less unethical to spread – regardless of whether one believes it. Seeing a fake-news headline one or four times reduced how unethical participants thought it was to publish and share that headline when they saw it again'. The scholars further discovered that readers are most likely to share headlines that were repeated by news media than share a new headline associated with the reported issues. In our literature search, we equally discovered that studies have investigated readers' ability to separate true news from false news headlines (Smelter & Calvillo, 2019). Smelter & Calvillo (2019) specifically found that when pictures accompany a news story and people are constantly exposed to it, the perceived accuracy of such news increased. The studies of Molek-Kozakowska (2013) and Chiluwa & Chiluwa (2020) significantly revealed the place of sensationalism in fake or false news construction, which according to the scholars, suggests news media intent of hiding truth from the public eye. In similarity to the findings of Smelter & Calvillo (2019), which established audience believability or otherwise of news reports, the study of Blom (2018) indicated that the relationship between perceptions of news source trust and news content expectancy determine acceptance of the accuracy of news headlines constructed for the reportage of illegal immigration in the United States of America. The study of Michael (2020) equally established that constructing news headlines in this way casts doubt on the innocence of a defendant. Therefore, there is a tendency that people who believe someone has really committed a crime is to be prosecuted for it. (Michael, 2020). Apart from the fact that journalists sensationalize the news, studies also shown that people did not understand the issues being reported due to the influence of personal attitudes, lack of access to the right information, low technical skills

and partisan bias towards newsmakers, which also plays a role in most cases (Hamid & Baba, 2014; Haselmayer et al., 2017). Hence, the use of features that misinform the readers comes in.

Theoretical underpinning

As the issues of the paper focus on how mainstream media misinform the audience on particular issues, consciously or unconsciously through their content, this study is underpinned with assumptions and propositions of agenda setting, its framing, use and gratification. Agenda setting is a key element of media production as it looks into trending news topics and how they affect audiences' opinions, understanding and perspective (McCombs & Valenzuela, 2007; Vargo et al., 2018). Vargo et al.(2018) noted that 'the first level of agenda setting asserts that the frequency in which news media mention and cover objects (e.g., issues and public figures) largely dictates what objects audiences think are important to society'. Invariably, the constant use of clickbait features has the propensity of influencing audience perception of the issues and newsmakers in the news. However, the rapid changes in the media ecosystem due to the technological developments has also been affecting the agenda setting in different ways as the media is not the only accountable institution, the audience is also responsible for the multiple-choice of sources, proliferation, and customization of information (Boynton & Richardson, 2016; Feezell, 2018). This means that the current situation gives the audience a kind of invisible power to dictate what and how the media should set the agenda, and this has a significant impact on the style of production, especially in the face of the era of information pollution.

Framing as a part of the theory of agenda setting proposes that journalists select salient parts of issues and report in ways that stress and elaborate the chosen parts to the public with the aim of making them interpret these parts in line with the selected frames or perspectives within a particular context (McCombs & Valenzuela, 2007; Scheufele & Tewksbury, 2007; Boynton, & Richardson, 2016). Obviously, news media are constructing headlines using clickbait features in relation to the intended agendas and frames through which they want the audience to see and interpret the issues. This position leads us to the theory of uses and gratification, which proposes that both the media and audience deploy media channels with the intent of gaining certain benefits (Turner & West, 2010; Valenzuelab et al., 2019; Kim et al., 2020). Since journalists know that audiences choose and use different media for different purposes, in this study, we argue that journalists will continue to use clickbait

and other features capable of misinforming the audience in headlines because of their own [journalists'] expected gratification [polluting public mind].

Measures, data and methods

Following our earlier propositions, content analysis and process tracing were used as research methods for understanding how Nigerian newspapers are misinforming the public through headlines constructions within the contexts of conflicts and crisis reporting. We focus on two major areas that are currently shaping the political business of the media in the country. In this study, we used the herder-farmer conflict and ENDSARS protests as a security issue and social justice crisis respectively as cases to investigate how clickbait features in headlines serve as conduit pipes of misinformation dissemination by the online versions of the mainstream newspapers in Nigeria. These were the hits of 2020 that moved to 2021. Our consensus is that using the features only cannot adequately reveal the extent to which the features can establish misinformation being created and disseminated by the newspapers. Therefore, we developed the Misinformation Specific Criteria Index (MSCI) and the Misinformation Dominant Criteria Index (MDCI) as supporters of clickbait features as misinformation conveyors.

Headlines of the news stories of each selected case constituted our first data source. Sentences and paragraphs of each story formed the second data source for the study. Photos and other illustrations were the third data source. The needed headlines were gathered using Google News [a normalized news search portal of Google] and Search Section of *This day*, *The punch*, *The premium times*, *The vanguard* and *The Nigerian tribune*. A total of 467 headlines were extracted from the Google tool and the newspapers' search sections. Two hundred and sixty-four headlines were mined for the herdsmen crisis while 203 headlines were extracted for the ENDSARS protests. Content categories were adopted as a research instrument for the collection of the required data from the headlines. The rubric rating scale was employed as a research instrument for revealing the connection between clickbait features and the content of the news stories analyzed. Content categories on the scale were considered as relational content categories. This is premised on the researchers' intent of finding out the linkage between the clickbait features and news story content. Specifically, the researchers aim at confirming the features in the content of the news stories. Formulated content categories for the clickbait features were coded using binary option [Yes = 2, No = 1]. Relational content categories were coded using the same approach.

Table 1

Content categories and rubric rating scale for headlines and misinformation determinants

Clickbait features in the headlines	Category	Meaning
	Why	Headlines that state reasons readers should believe the news story or intends to explain specific issues or persons in the news story
	What	Headlines that point a specific person or issue for the readers before reading the news story
	This	Headlines that establish the direction of the story or tell the readers what they should think about
	Number	Headlines that contain a figure which establishes the focus of the news story
	Question	Headlines that contain a question mark or are written in a question format
	Piggybacking	This represents headlines that have a well-known person, company and organization
	See	A headline that asks the readers to discern and deduce specific issues from a news story
	Possessive pronouns	Headlines that contain personal pronouns such as I, my, our etc.
Misinformation specific criteria	Category	Meaning
	Inaccurate photo(s)	Presentation of photo(s) that do not relate with the issues reported in the news story
	Inaccurate photo caption	Titling photo using texts that do not conform with the objects or people depicted in the photo and related to the issues in the news story
	Contradicting statistics	Presenting numbers that are different from what was stated in the headline. This also represents the inconsistent numbers from one part of the story to another
	Satire	Using words, figures or objects to exaggerate issues in the news story or ridicule newsmakers or disrepute them
	Conflicting identities and construction of newsmaker and source	Using different frames to represent a newsmaker and a source

Misinformation dominant criteria	Category	Meaning
	Absolute conformation	It aligns with misinformation features and meets 50% or more of the criteria for misinformation in a news story
	Moderate conformation	It slightly aligns with misinformation features and meets at least less than 50% of the misinformation criteria
	No conformation	It does not align with misinformation features and lacks all the misinformation criteria

Sources: Safran, 2013; Lai & Farbrot, 2014; Tenenboim & Cohen, 2015; Kuiken, 2017; Authors

Reliability of the content categories and rubric rating scale were conducted using Alpha Cronbach. From the total of 264 herdsmen and 203 ENDSARS headlines, 10 headlines were chosen from each case for the content categories reliability test. Simple random sampling procedure suggested by Riffe et al. (2019) as one of the means of ensuring the reliability of content categories when researchers use the same population instead of using external population was later used for the selection of the headlines. Overall reliability for herdsmen case with 17 content categories is .526 Cronbach's Alpha, while ENDSARS had .434 scores with the same number of content categories. The researchers accepted these scores as moderately reliable considering the fact that the less content categories were less than 20 items, which were expected to give more than 40% and 50% reliability percentage (Briggs & Cheek, 1986; Starkweather, 2012).

However, the individual reliability test reveals that within the herdsmen case *Why* had high-reliability score of .649 followed by *Satire, Question, What, This, Number, See, Conflicting identities of newsmaker(s) and source(s), Possessive pronouns, No conformation and Moderate conformation* which had more than 50 reliability score. *Contradicting statistics, Piggybacking* and *Absolute conformation* had less than 50 reliability scores. This falls within the moderate reliability score range, which also constituted a large percentage of the reliability scores for the content categories in the context of the ENDSARS case. These scores are expected to have an impact on the outcomes of the analyses that would be carried out on the data collected for each case. The collected headlines were subjected to binominal, Friedman tests and hierarchical logistic regression analysis. Binominal test was used for the purpose of revealing the dominant categories across the cases. Friedman test was adopted for analysis of the relationship that exists among the categories. Herdsmen and ENDSARS

were cases considered as groups in the Friedman test. Before the chi-square test, descriptive statistics were used to identify differences in the mean value of each clickbait feature. As a result, it is impossible to state that all of the attributes are relevant because the descriptive results show which of them has the greatest mean score. The presence of a chi-square only aided in the final outcome. The chi-square test was used to investigate all of the clickbait features as variables, with the goal of showing a strong relationship between the features. It is also important to state that the number of headlines in the analysis in some tables varied due to the fact that the used software (SPSS) only turned out a number of valid observations for each category/variable. The use of the hierarchical logistic regression analysis helped the researchers in understanding the specific linkages and variation of the independent variables [clickbait features and specific misinformation criteria] in the dominant misinformation criteria earlier discussed. The outcomes of the regression analysis, after using three models, led to the proposition of a theoretical model for the understanding of the extent to which Nigerian mainstream newspapers can misinform the public through clickbait features in their headline construction.

Results and discussion

In this section, the results of the analyses are presented focusing on two levels of analysis. The first analysis entails the revelation of the dominant clickbait features in the headlines of the herdsmen crisis and the ENDSARS protests. The second level focuses on the presentation of advanced results from the first level, which points out the significant linkages between the features and misinformation.

Table 2

**Descriptive statistics of clickbait features, specific and dominant
misinformation from Friedman test**

Clickbait features	N	Mean	Mean rank	Std. deviation
Why	464	1.02	3.70	.122
What	464	1.59	6.01	**.492**
This	464	1.08	3.97	.278
Number	464	1.17	4.30	**.372**
Question	464	1.02	3.71	.138
Piggybacking	464	1.75	6.65	**.432**
See	464	1.02	3.72	.145
Possessive pronouns	464	1.08	3.94	.264
Specific misinformation				
Inaccurate photo(s)	467	1.14	3.10	**.347**
Inaccurate photo caption	467	1.20	3.26	**.403**
Contradicting statistics	467	1.04	2.85	.193
Satire	467	1.06	2.89	.230
Conflicting identities of news maker and source	467	1.06	2.91	.245
Dominant misinformation				
Absolute conformation	465	1.04	1.59	.198
Slight conformation	465	1.17	1.79	**.380**
No conformation	465	1.73	2.63	**.443**

Source: Authors

Key: *minimum = 1, maximum = 2*

Table 2 provides the summary of the dominance of each clickbait feature, specific and dominant misinformation across the two cases. According to the data, among the studied clickbait features, *Piggybacking* (N=464, M=1.75, MR=6.65, SD=.432), *What* (N=464, M=1.59, MR=6.01, SD=.492) and *Number* (N=464, M=1.17, MR=4.30, SD=.372) were used predominantly by the newspapers. *Inaccurate photo caption* (N=467, M=1.20, MR=3.26, SD=.403) and *Inaccurate photo(s)* (N=467, M=1.40, MR=3.10, SD=.347) were the dominant specific misinformation, according to the analysis. Analysis further reveals that in terms of dominant misinformation, there were headlines that did not conform with misinformation (N=465, M=1.73, MR=2.63, SD=.443). At the same time, there were headlines that slightly conformed with

misinformation (N=465, M=1.17, MR=1.79, SD=.380). The clickbait features data were further explored in *Table 2*, where one-variable chi-squared test was used for the purpose of revealing significant relationship among the features.

Table 3

One-variable chi-squared test from the Friedman test of the clickbait features of the selected cases

N	464
Chi-square	1488.584
Df	7
Asymp. Sig.	**.000**

Source: Authors

It can be seen from the data in *Table 3* that the use of clickbait features by the newspapers was significant. This could be deduced from a chi-square value of 1488.584 at 7-degree freedom, which is significant (P<.000) at less than the 0.05 level of significance. It can therefore be concluded that the newspapers used clickbait features for misinformation purposes. This evidence is explored further with the outcomes of a binominal test conducted to determine which of the cases had each of the clickbait features the most, using a 75% test proportion.

Table 4

Binominal test of the clickbait features of the selected cases

		Category	N	Observed prop.	Test prop.	Exact sig. (1-tailed)
Why	Group 1	**Herdsmen**	460	.99	.75	.000
	Group 2	Endsars	7	.01		
	Total		467	**1.00**		
What	Group 1	ENDSARS	277	.59		
	Group 2	Herdsmen	189	.41	.75	.000[a]
	Total		466	**1.00**		
This	Group 1	**Herdsmen**	427	.92		
	Group 2	ENDSARS	39	.08	.75	**.000**
	Total		466	**1.00**		

Number	Group 1	ENDSARS	77	.16		
	Group 2	Herdsmen	390	.84	.75	.000[a]
	Total		**467**	**1.00**		
Question	Group 1	**Herdsmen**	**458**	**.98**		
	Group 2	ENDSARS	9	.02	**.75**	**.000**
	Total		**467**	**1.00**		
Piggybacking	Group 1	**Endsars**	**351**	**.75**		
	Group 2	Herdsmen	116	.25	**.75**	**.493**
	Total		**467**	**1.00**		
See	Group 1	**Herdsmen**	**456**	**.98**		
	Group 2	ENDSARS	10	.02	**.75**	**.000**
	Total		466	1.00		
Possessive pronouns	Group 1	**Herdsmen**	**432**	**.93**		
	Group 2	ENDSARS	35	.07	**.75**	**.000**
	Total		**467**	**1.00**		

Alternative hypothesis states that the proportion of cases in the first group < .75.
Source: Authors

Data in *Table 4* indicate that the features were more deployed by the newspapers in reporting the herder-farmer crisis than in publishing issues and needs around the ENDSARS protests. With the observed proportion exceeding test proportion [75%], why (N=460, OP=.99, TP=.75, P<.000), this (N=427, OP=.92, TP=.75, P<.000), question (N=458, OP=.98, TP=.75, P<.000), see (N=456, OP=.98, TP=.75, P<.000) and possessive pronouns (N=432, OP=.93, TP=.75, P<.000) were predominantly used by the newspapers for constructing herder-farmer crisis' headlines. According to the data, the observed and test proportion of using piggybacking (N=351, OP=.99, TP=.75, P<.000) tied in ENDSARS' headline construction, but not significant (P>.493). Overall, the results suggest that the newspapers are misinforming the public in their reportage of the herdsmen crisis than doing the same during the protests. This position is further explored with the presentation of other results in *Table 5*, which indicates the extent to which the features were used in framing the two cases and contributed to our conceptualized and operationalized absolute misinformation indicator.

Table 5

**Manifestation of clickbait features in absolute misinformation
in the reportage of the cases**

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
Why	-.192	.645	.089	1	.766	.825	.233	2.922
What	-17.998	12206.252	.000	1	.999	.000	.000	.
This	.788	.607	1.682	1	.195	2.198	.669	7.226
Number	.449	.779	.332	1	.565	1.566	.340	7.212
Question	17.949	7312.799	.000	1	.998	62390960.055	.000	.
Piggybacking	-.322	.490	.432	1	.511	.725	.277	1.895
See	17.391	20057.394	.000	1	.999	35702624.776	.000	.
Possessive pronouns	-1.028	.602	2.915	1	.088	.358	.110	1.164
Constant	-38.102	21348.913	.000	1	.999	.000		

Source: Authors

Based on the data presented in *Table 5*, it emerged that possessive pronouns were more than two times used in both cases (Wald=2.915) while *This* (Wald=1.682), *Piggybacking* (Wald=.432) and *Why* (Wald=.089) were more than and less than one time employed respectively. Understanding the linkages from the beta coefficient perspective indicates that the use of *Why* and *Piggybacking* reduce the potential of the feature contributing to absolute misinformation by less than one unit. It was more than 17 and 102 units for *What* and *Possessive pronouns* features accordingly. Using the same perspective, data indicate the relative contribution of *Question* (B=17.949) and *See* (B=17.391) as dominant features facilitating absolute misinformation based on the coverage of the two cases by the newspapers. The results signify that when the features were used once, they increased absolute misinformation by more 17 times. This is also applicable to *This* (B=.788) and *Number* (B=.449) when they relatively conveyed misinformation based on their less than one unit of facilitating absolute misinformation. These results align with the earlier finding of Michael (2020) which establishes how the public casts doubt on the innocence of a defendant who was later justified by the court. Situating the predominant use of *This*, *Number*, *Question* and *See* features within the propositions of agenda setting, framing and uses and gratification theories indicate that the newspapers wanted the public to understand the two cases from the issues that

they considered important around the cases. Surprisingly, as we found, Kuiken, et al., (2017) had earlier discovered the linkage of questions and numbers with clickbait headlines and words such as 'this', 'why' or 'what' as features of clickbait. From the agenda setting theory, we have understood that news media select a certain aspect of happenings to consider significant and want the public to prioritize in their minds and while discussing the happenings (McCombs & Valenzuela, 2007; Scheufele & Tewksbury, 2007; Boynton, & Richardson, 2016). The framing theory, on the other hand, exemplifies the place of reinforcing the selected issues in ways that make the public have a more positive or negative concern about the happenings. The failure of *Why*, *What*, *Piggybacking* and *Possessive pronouns* to facilitate absolute misinformation could be premised on the fact that the media agenda, mostly the views from the newspapers [editorial] and the public agenda [those expressed by individuals through features and news formats] on the two cases, resonate with the agenda setting and framing theories' propositions earlier explained. The analysis and interpretation led to the proposition of a theoretical model presented in *Figure 1*, where the positive and negative beta coefficients of the independent variables [clickbait features] are drawn along with our defined absolute misinformation. The model was tested using hierarchical logistic regression and presented in *Table 4*.

Figure 1

Emerged theoretical model
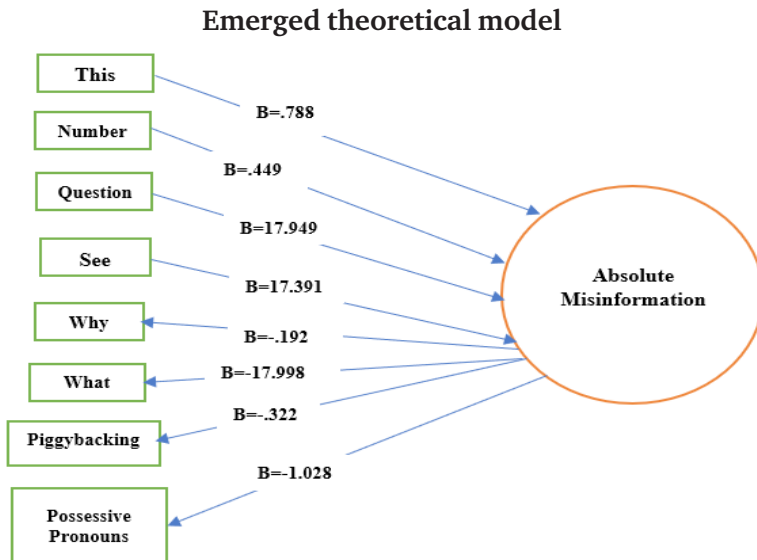
Source: Authors

The data in *Table 6* further enhanced the descriptive results presented in *Table 2*, where the dominant clickbait features, specific and dominant misinformation are established. The information in *Table 6* is the result of a Friedman test analysis performed on the specific and dominant misinformation categories.

<div align="right">*Table 6*</div>

**One-variable chi-squared test from the Friedman test of specific
and dominant misinformation in the two cases**

Specific misinformation	
N	467
Chi-square	139.960
Df	4
Asymp. sig.	**.000**
Dominant misinformation	
N	465
Chi-square	397.116
Df	2
Asymp. sig.	**.000**

Source: Authors

Data in *Table 6* can be compared with the data in *Table 3,* which shows the relationship among the clickbait features in the headlines of the newspapers. It is apparent from the data that significant relationship exists among the categories that formed specific (Chi-square value=139.960, df=4, P<.000) and dominant (Chi-square value=397.116, df=2, P<.000) misinformation. *Table 7* further illustrates which of the categories was mostly used by the newspapers in constructing headlines for the two cases. Similar to the percentage proportion used for determining this for the clickbait features, 75% test proportion was equally employed.

Table 7

Specific and dominant misinformation in the two cases

Specific misinformation		Category	N	Observed prop.	Test prop.	Exact sig. (1-tailed)
Inaccurate photo(s)	Group 1	**Herdsmen**	**402**	**.86**	.75	.000
	Group 2	ENDSARS	65	.14		
	Total		**467**	**1.00**		
Inaccurate photo caption	Group 1	ENDSARS	95	.20	.75	.000[a]
	Group 2	Herdsmen	372	.80		
	Total		**467**	**1.00**		
Contradicting statistics	Group 1	**Herdsmen**	**449**	**.96**	.75	.000
	Group 2	ENDSARS	18	.04		
	Total		467	1.00		
Satire	Group 1	ENDSARS	26	.06	.75	.000[a]
	Group 2	Herdsmen	441	.94		
	Total		**467**	**1.00**		
Conflicting identities of news maker and source	Group 1	**Herdsmen**	**437**	**.94**	**.75**	**.000**
	Group 2	ENDSARS	30	.06		
	Total		**467**	**1.00**		
Dominant misinformation						
Absolute conformation	Group 1	**Herdsmen**	**446**	**.96**	**.75**	**.000**
	Group 2	ENDSARS	21	.04		
	Total		**467**	**1.00**		
Slight conformation	Group 1	ENDSARS	81	.17	.75	.000[a]
	Group 2	Herdsmen	385	.83		
	Total		**466**	**1.00**		
No conformation	Group 1	Herdsmen	125	.27	.75	.000[a]
	Group 2	ENDSARS	341	.73		
	Total		**466**	**1.00**		

Alternative hypothesis states that the proportion of cases in the first group < .75.
Source: Authors

Similar to the results presented in *Table 4*, the data in *Table 7* show the case where the formulated specific and dominant misinformation occurred the most. In the specific misinformation classification, inaccurate photo(s) (N=402, OP=.86, TP=.75, P<.000) were predominant in herdsmen crisis than in ENDSARS protests. It also emerged that contradicting statistics (N=449, OP=.96, TP=.75, P<.000) usage was accorded the same priority by the newspapers in

their herdsmen news content. This is also resonated with the use of conflicting identities of news maker and source (N=437, OP=.94, TP=.75, P<.000). The dominant manifestation of the conflicting identities of the newsmaker(s) and the source(s) implied in the news content of the herdsmen crisis indicate(s) the newspapers' intention to portray the key actors [herders] as perpetrators of every crime committed on farmlands, in remote locations, and elsewhere in the country. According to the data, absolute (N=446, OP=.96, TP=.75, P<.000) and slight (N=385, OP=.83, TP=.75, P<.000) misinformation existed in herdsmen crisis than in ENDSARS protests. The overall results presented so far are further reinforced in three hierarchical logistic regressions presented below.

Table 8

Variation of three models in absolute misinformation in the reportage of the cases

Model	Log likelihood	Cox & Snell R square	Nagelkerke R square	Overall accuracy prediction
Grammatical bait headlines	152.990	.013	.044	95.9
Human-number related bait headlines	51.715	.205	**.711**	**97.4**
Visualization bait headlines	7.271	.277	**.961**	**99.6**

Source: Authors

For more explication of the model presented in *Figure 1*, *Table 8* entails the outcomes of the model in line with the researchers' intent of knowing the extent to which the clickbait features vary in the defined absolute misinformation. For better conceptualization of the model, *Why, What, This* and *Possessive pronouns* clickbait features were considered as elements of grammatical bait headlines model [GBH] while *Question, See* and *Number* which are clickbait feature, were considered along with *Satire, Contradicting statistics*, and *Conflicting identities of newsmakers(s) and source(s)* which are specific misinformation criteria, as elements of human-number related headlines model [HNRH]. Visualisation model [V] basically entailed inaccurate photo(s) and inaccurate caption of the photo(s) by the newspapers. According to the data, the V model has 96.1% (Nagelkerke R^2=.961) propensity of facilitating absolute misinformation with an accuracy of 99.6%. HNRH model also has a better chance of contributing

to absolute misinformation (Nagelkerke R^2=.711) than the GBH model (Nagelkerke R^2=.961, Accuracy=97.4%).

Conclusion and recommendations

The study has increased our understanding and contributed to the existing literature that conventional newspapers like bloggers and social media users can also spread misinformation through headlines. It has also been revealed that spreading misinformation through headlines can differ significantly in line with the issues of the reporting or the newsmakers. In line with these, media practitioners and their managers need to revise the best practice of constructing headlines in times of crisis in order to avert being contributors to misinformation. This is imperative since the public prefers getting information from conventional newspapers because of the perceived credibility and ability to present balanced views of the newsmakers and actors in the news. The evidence that the newspapers misinformed the public in their reports on the herdsmen crisis rather than doing the same during the protests has created the need for further study. The consideration of survey, in-depth interviews and focus group discussions in the future study will help researchers in interrogating rationales behind the use of clickbait features in cases similar to what the study investigates. Could it be an ideological agenda, an oversight, or deliberate intent to pursue it due to its fragility for economic gain? Questions like this require robust data gathering and analysis using both quantitative and qualitative approaches.

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Public and private media coverage of the military coup in Zimbabwe

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Abstract

This qualitative study examines coverage by Zimbabwe's media of the events surrounding the military coup of November 2017. The study investigates 38 selected stories; 16 from the state controlled *The Herald* and 22 from the private owned *Newsday* newspapers. The sampled articles were considered relevant to the 'military assisted political transition' that took place in the period under study. Critically, the study is aimed to understand how events that transpired during the transitional period leading to President Robert Mugabe ouster, after three decades in power, have shaped journalism practice in Zimbabwe. Considering that the transitional period marked a major turning point in Zimbabwe's political life, this study seeks to understand the role played by the country's private and public media. In this paper, the authors try to find out who the two newspapers wrote about during the coup period, why the two normally opposite newspapers converged against Mugabe and how they framed his demise. Framing theory is used as an analytic lens of the study. The theory analyses meanings of statements, language and words used by the two newspapers. The study found out that, in an unusual situation, the newspapers reported a similar language and tone, demonstrating media convergence between a state-controlled newspaper and a private and oppositional publication that never existed since the country had gained independence in 1980. The study also observed that these media outlets violated journalistic ethics of fairness and right to reply as they saw the toppling of President Mugabe as crucial to the progress of the country.

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Keywords
Public media, private media, *Newsday*, *The Herald*, military coup, Robert Mugabe.

Introduction
In November 2017, the former President, Robert Mugabe, was ousted after 37 years at the helm in what was called 'Operation restore legacy' (Beardsworth et al., 2019). The army, which for decades helped sustain Mugabe's rule in both party and state, turned against him and supported Emmerson Mnangagwa, then Mugabe's deputy (Ndawana, 2020). What remains, largely, unasked is the role the media – both private and public – played during the transitional period. The purpose of the article is to fill that gap by examining how two newspapers, *The Herald* and *Newsday*, represented and framed events that took place between November 13 and November 24, 2017, the day Mnangagwa was inaugurated as Zimbabwe's second executive president. The secondary goal of this study is to respond why private and public media, which for almost three previous decades presented opposite narratives, converged in framing Mugabe's demise and Mnangagwa's elevation.

The Herald newspaper has the government as the major shareholder with a stake of 51% while the rest is owned by private companies and individuals (Moyo, 2010). Throughout its history, *The Herald* has always reported as a mouthpiece of the ruling elites beginning with interests of colonists until 1980, when Mugabe took over turning the newspaper into a mouthpiece of Zimbabwe's ruling party, Zimbabwe African National Union Patriotic Front (ZANU-PF) (Mare, 2017; Matsilele, 2013). *Newsday* is a private newspaper owned by Alpha Media Holdings (AMH), publishers of *The Independent* and *The Standard*. The former was established in 2010 while the later were formed in 1996 and 1997 respectively. Veteran journalist, Trevor Ncube, owned 100% shares of the publishing house at the time of the investigation.

Rationale of the study
Several studies have already been carried around the ouster of Robert Mugabe in a military-style coup (Asuelime, 2018; Beardsworth et al., 2019; Magaisa, 2019). Most of the studies have looked at the role of the military in civilian politics, the false hope presented by the military assisted transition and the reconfiguration of the state due to the military-politics nexus. Fewer studies conducted looking at the role of the media, are positioned during the post coup period (Mare, 2019; Munoriyarwa & Chibuwe, 2021; Mare & Matsilele,

2020). For example, Mare (2019) looked at media transformation in post-coup Zimbabwe with Munoriyarwa and Chibuwe (2021) looking at the emerging forms of digital journalisms post coup. Mare & Matsilele (2020) looked at the state of hybrid media systems in post-Mugabe Zimbabwe. These studies do not paint a picture of the role media played during the transition but rather respond to the post-coup media environment. It is this gap in the scholarships this study fills and will contribute to understanding of the extent of the role media played in Zimbabwe coup transition and help determine how media can be viewed in semi-authoritarian regimes going through complex transitions.

The role of the news media in Africa in influencing political transitions is an important but often neglected research topic in the field of journalism and media studies. Yet, there is a strong interplay between media and politics, especially in developing contexts such as Zimbabwe, where authorities stifle media and other civil and political rights (Chuma et al., 2020; Chuma, 2008; Moyo, 2004; Moyo, 2010). Studying the two newspapers' coverage of the fall of Mugabe in the context of media sensationalisation, polarisation and legislation that stifles private media operations assist the study to examine the shifts and convergence of interests by the papers. This is in the context of laws and extra-legal regime that undermined the performance of news media to report freely on public matters that for a long time have been applied selectively against the private media (Zhou & Zvoushe, 2012; Makwambeni & Adebayo, 2021). The state media on the other hand, has been used to advance the ruling ZANU PF and at times the leading elites of the ruling party. These laws include the Access to Information and Protection of Privacy Act (AIPPA) of 2002, which among other things compelled journalists and media institutions practising in Zimbabwe to register with a government-appointed commission (Mabweazara, 2018; Matsilele, 2013). The Broadcasting Services Act (BSA) of 2001 entrenched the monopoly of the sole state broadcaster, the Zimbabwe Broadcasting Corporation (ZBC). The Public Order and Security Act (POSA) of 2002 infringes on the exercise of fundamental civil and political liberties by making it unlawful to assemble, protest or demonstrate without police authority (Hondora, 2003).

Theoretical frames

Framing theory explains how the media play a critical role in determining how the public views societal events (Park et al., 2012; Chuma, 2005; Adebayo & Makwambeni, 2020). Agreeing with Sung-Yeon et al. (2012), Goffman (1974) posits that, 'frames are the "schemata of interpretation", by which people can

"locate, perceive, identify, and label a seemingly infinite number of concrete occurrences defined in its limits.'" Scheufele & Tewksbury (2007) note that framing assumes how an issue characterized in news reports can have an in uence on how it is understood by audiences. Frames are abstractions that work to organize or structure the meaning of a message. Hurtikova (2013) advances framing as being concerned with the presentation of issues, persistent patterns of cognition, interpretation, and presentation, with the salience of issues. Goffman (1974) agrees that people interpret events around them through primary framework. Its usefulness as a framework, Goffman observes, does not depend on other frameworks. Lecheler & de Vreese (2012) opine that framing theory can explain the extent to which the media affect citizens' understanding of politics. They argue that 'a frame can affect an individual by stressing certain aspects of reality and pushing others into the ground – it has a selection function.' It is observed that frames make suggestions to the audience through making some considerations more significant than others, 'thereby leading these considerations to be applied when forming an opinion' (Lecheler & de Vreese, 2012). In this study, the two newspapers, for the first time, unanimously framed Mugabe as an old tyrant and deserved to be overthrown from power. Such framing of Mugabe could have arguably facilitated public protests that accompanied the military coup. Akpabio (2011) has looked at how Zimbabwean immigrants in Botswana are framed as a way of denying them belonging. Pasirayi (2017) used the framing theory to analyse how the fast-track land reform in Zimbabwe was framed in the state-controlled press. Pasirayi (2017) submits that selecting certain topics over others and providing coverage to people or events, the media set an agenda on issues that they want the public to debate, how to debate and consider the most significant. Scheufele (2000) distinguishes five factors that influence the frames of journalists, namely social norms and values, organisational pressures and constraints, pressures of interest groups, journalistic routines and ideological or political orientations of journalists. These two newspapers showed through their language that they were anti-Mugabe and celebrated the coup by describing Mugabe as a dictator and Mnangagwa as a hero and liberator. The media 'provide cognitive knowledge informing us about what is happening, but they also order and structure political reality, allotting events greater or lesser significance according to their presence or absence on the media agenda' (McNair, 1995). In this instance, the two newspapers were subjective in their portrayal of Mugabe, which could have influenced public perceptions about his continued stay in power and his consequent ouster.

Methodology

This study employs the qualitative approach and the purposive sampling design. A qualitative research 'uses a naturalistic approach that seeks to understand a phenomenon in context-specific settings, such as real-world setting [where] the researcher does not attempt to manipulate the phenomenon of interest' (Patton, 2002). The researchers conducted a desktop ethnography searching for articles that were published in these two newspapers during the research period. Focus was placed on frames identified during the military operation as reported by the two newspapers. As it has already been mentioned, this study uses qualitative content analysis with bias towards thematic analysis. Braun & Clarke (2006) describe thematic analysis as 'a method for identifying, analysing and reporting patterns (themes) within data' which is mainly descriptive in approach. In gathering data for this investigation, the researchers started by harvesting all stories that appeared between November 13 and 24, 2017 from two titles under review. The articles selected were a mixture of editorials and news articles. Articles help in understanding the overall scope of events taking place while editorials give a window into what a newspaper considers important (Matsilele, 2013). The researchers conducted a google search by date against a newspaper title, which pulled all relevant articles that were published on a specific date. This was done for all dates classified as critical for this study, that is November 13 to 24, 2017. The *Newsday* newspaper had 26 articles that appeared in direct relation to the military coup and ZANU PF infighting while *The Herald* had 16 articles identified.

Discussion and analysis

The vilification of Mugabe

The two newspapers demonised Mugabe as a way of legitimising the military coup. Attaching labels is meant to strip individuals of their humanity, citizenship, legitimacy or belonging. In this case, labels attached on Mugabe such as 'tyrant' and 'old' were meant to delegitimise him as the leader of Zimbabwe. The two newspapers portrayed Mugabe as an old tyrant and soft on corruption respectively (*Newsday,* November 22, 2017; *The Herald*, November 22, 2017) who should have been removed from the office and did not deserve any democratic recourse. While the private owned media was known to have an adversarial relationship with Mugabe and his style of leadership, the shift in tone and stance by *The Herald* was the most striking. It is observed that the first two days under review, the state controlled *The Herald* newspaper was firmly in the hands of Mugabe sympathisers as the newspaper blacked out the press

conference held by the military generals. However, when it became evident that the military was in control, *The Herald* followed the vilification and critical tone set by the *Newsday*. Since independence 1980, Mugabe received accolades and praise from the state controlled *The Herald* until events of November 2017. *The Herald* of November 22, 2017, issued with a headline 'Zanu-PF pays tribute to Mugabe', seems to be giving him respect but the contents of the article deviates from the headline as it claims, 'He had indeed overstayed the hospitality of the people of Zimbabwe. Worse still, he surrounded himself with people of criminal conduct, primitive and disrespectful attributes.' This paradox, if anything, demonstrates changing power dynamics. the *Newsday* of November 17, 2017 had a headline, 'Breaking: Mugabe too old & must go – All Zanu PF provinces', portrayed Mugabe as a leader who had lost control of the state and party to a faction led by his wife, Grace. Demonstrating that, Mugabe did not deserve to remain president regardless of having been elected in 2013, the *Newsday* of November 22, 2017 issued with a headline 'Jubilation as tyrant Mugabe falls.' The subjective representation of Mugabe supports one of the core arguments in qualitative analysis, which dismisses the notion of objectivity in media representation. The subjective characterisation of Mugabe as a tyrant was meant to remove any sympathy he could potentially receive from within and outside the country. In this regard, the characterisation of Mugabe by the two newspapers fits in the framing view which submits that framing theory explains how the media play a critical role in determining how the public views societal events (Park et al., 2012). This framing was meant to justify Mugabe's unconstitutional removal by the military.

Portrayal of Mnangagwa as a hero

Scheufele (2000) argues that journalistic frames such as social norms and values, organisational and ideological or political orientations of journalists affect how the media cover news. In this respect, the ownership and control of *The Herald* by the state, influenced on demonization of Mugabe and the legitimation of the coup leaders. The *Newsday*'s ideological position as a market driven and liberal newspaper that promotes human rights influenced its coverage on Mugabe's fall who it framed as authoritarian. Both newspapers framed Mugabe's nemesis as a hero and liberator in order to influence public opinion against Mugabe. Following Mnangagwa's dismissal from the government on November 6, 2017 and subsequent return on November 22, 2017, both newspapers portrayed Mnangagwa as a victim and a hero. *The Herald* of November 17, 2017 issued with a headline 'Breaking: Zanu-PF calls for President Mugabe's resignation.' The newspaper wrote, 'The provinces also demanded the reinstatement of

former Vice President Cde Emmerson Mnangagwa who they said was dismissed without endorsement of the central committee.' The paper sought to portray Mnangagwa's firing as unconstitutional and therefore invalid. The paper ignores the fact that Mugabe had powers in both the party and the state to hire and fire his two deputies including members of the political bureau. The *Newsday* of November 23, 2017 described Mnangagwa as a hero on his return from exile in South Africa. It is written, 'Hero's welcome for Mnangagwa.' The story goes on to say, 'New Zanu PF leader and President-designate Emmerson Mnangagwa made a triumphant return home yesterday as pressure piled to form a coalition government comprising of key stakeholders to stabilise the economy.' The paper in using the phrase 'triumphant return' invokes biblical Jesus character as he visited Jerusalem as 'Israel's King'. Mnangagwa is therefore portrayed as a leader who is coming to redeem the country from its political and economic turmoil under Mugabe. The message of Mnangagwa as the coming 'king' had already been infused into the national consciousness through a musician who is also a Mnangagwa's adoring supporter, Jah Prayzah, with his popular song called 'Mudhara Achauya' translated as 'father' or 'daddy' will come. It can be assumed that this message is about coming to power. Mnangagwa also coded his messages in mystery playing into the mysterious symbolism he represented towards Mugabe's ouster. While in exile, Mnangagwa issued a statement on November 8, 2017 telling Zimbabweans of his impending return to lead Zimbabwe. Both newspapers did not remind the readers that Mnangagwa had been part of Mugabe's government and contentious policies for the past 37 years. It is this 'hero' who would also see for the first time in nearly two decades western envoys coming to Zimbabwe for a president's inauguration. Such high-level attendance by top envoys such as Rory Stewart was meant to legitimise Mnangagwa's ascendency as portrayed by the newspaper. The *Newsday* of November 24, 2017, reported that Stewart said that the country had experienced was 'an absolutely critical moment'. The attendance by Stewart from Zimbabwe's former imperial power, the United Kingdom, and many other western envoys in Zimbabwe was part of international legitimation of Mnangagwa's leadership. This downplayed the unconstitutional overthrow of Mugabe. This paper argues that in its framing of Mnangagwa, the media also failed to abide by its journalistic ethics of giving a truthful and fair coverage. Mnangagwa, whom the media labeled as the 'coming messiah', was the same person who has been named by various independent reports on the Matabeleland massacres of the 1980s and also the crackdown on opposition politicians in 2008.

The military as popular change agents

Since independence, the military has been accused of interfering in the electoral and public affairs of Zimbabwe. Moyo (1992) in his book, 'Voting for Democracy: Study of Electoral Politics in Zimbabwe', accused the military of interfering in the 1990 elections by campaigning for ZANU PF party. Interestingly, for the first time across political divide, citizens and political parties lauded the military for its interference in civilian political affairs. The private media until November 2017 was critical of the military dabbling in electoral and political affairs of the state. Notably the private media accused the army of the human rights violations attendant to its interventions, for instance, in the 2008 disputed elections. *The Herald* of November 16, 2017 wrote, 'no military takeover in Zimbabwe.' This gave the military space to counter allegations of a military coup. In the statement published by *The Herald*, the military claimed that 'the action taken by the Zimbabwe Defence Forces (ZDF) did not represent a military takeover of the Government but was meant to address the political, social and economic situation that could have ended in violent conflict.'

The Herald did not make any attempts to give a balanced view of what was unfolding in Zimbabwe. If anything, this statement defeats the denials captured in the headline as interfering in the political, social and economic affairs of the state is beyond the limits of the military as provided for by the country's constitution. The *Newsday* of November 16, 2017 had a headline 'Military takeover should be temporary.' This tacitly gave support of the military interference in civilian affairs by endorsing military intervention but for a limited period. Both newspapers are not critical to the unlawful military intervention in public affairs without the authority of Mugabe as provided under the constitution. *The Herald* of November 18, 2017 carried an article demonstrating the extent to which the military had gone in extending its mandate to policing affairs such as giving clearance to public protests, which is the role of the police. The paper quoted ZDF commander General Chiwenga saying, 'We wish to advise the nation that for as long as the planned march remains orderly, peaceful and in tandem with the fundamental Bill of Rights and within the confines of our Constitution and without hate speech and incitement to cause violence, we fully support the march.'

The language and expression of the authority clearly depicts General Chiwenga as de facto head of state, a clear sign of a military coup, which both newspapers failed to name it what it was. This failure by the newspaper seems to be well choreographed, the military was to be viewed as messianic figures in the ouster of Mugabe. The media by failing to be critical and giving alternative

views, apparently held by many across the political isle, demonstrates their involvement in confirming the role of military in civilian affairs.

ZANU PF and constitutional processes

The study reveals ZANU PF is represented as a party that follows due processes in administering state and party affairs. The two newspapers do not expose the double standards and hypocrisy of the leadership of ZANU PF over the claims. For instance, *The Herald* of November 18, 2017 had a headline 'ZANU PF recalls Mugabe.' The story insinuated the Mugabe was removed, following due processes. The story went on further to say, 'ZANU-PF yesterday recalled President Mugabe from the position of party First Secretary and replaced him with former Vice President Emmerson Mnangagwa whom the ruling party also reinstated as a Central Committee member.' The fact of the matter is that there is no provision within ZANU PF constitution to recall the president of the party outside congress. The recall claim is therefore misleading. The statement was meant to remove liability from the army's military coup, which is unlawful. The *Newsday* gave legitimacy to a questionable ZANU PF meeting that 'recalled' Mugabe. In its story from November 19, 2017 under the headline 'Breaking: ZANU PF fires Mugabe, reinstates Mnangagwa', the newspaper claims that Mugabe was removed by the Central Committee. Both newspapers did not question the failure by the party to follow due processes as it claimed in expelling Mugabe. This approach fits into Akpabio (2011) argument that the news media use negative frames to deny people a sense of belonging. This framing was arguably embraced against Mugabe in order to legitimise the ascendancy of Mugabe and position Mnangagwa as the legitimate leader of ZANU PF post Mugabe.

In the firing of both Mugabe and Mnangagwa from the party in a period of a month, there was never a disciplinary process against either of the two leaders, which demonstrates the lack of due process and at the failure by the media to play its watchdog role in highlighting such problems. As argued by Trappel (2011), the democratic role of journalism and the media is to identify and make public the failings of elected representatives and public officials. Curran (2002) observed that the central thesis of liberal media history in democratic process is the development of the mass media, whose principle democratic role, according to traditional liberal theory, is to act as a check on the excesses of the state. The media should play a watchdog role and act as providers of information and resources for public opinion formation. They should circulate information and ideas that are deemed essential in sustaining a vibrant civil society and a functioning democracy. As this paper has demonstrated, the two newspapers failed to play the watchdog role on the activities of the military in public affairs.

Instead of playing their watchdog role, the two newspapers acted as lapdogs of the military as it romanticised the coup. This failure is in direct conflict with what other scholars have argued stating that the press can actually strengthen democracy in weak states, 'In any country where political institutions and opposition groups are not yet or no longer – operating freely, a press able to report and reflect popular discontent with the course of national policy or with the government of the moment can serve as important warning light identifying early problems that demand solution if political stability is to be maintained' (Unger, 1990).

Unger argues further that the rarity of media freedom in developing countries and former Communist states was, in his view, proof of how difficult it was for a democratic ethos to be socialized and to take root. That press freedom has traditionally been one of the first liberties to be denied by totalitarian governments demonstrates its significances in emerging democracies (Unger, 1990).

While it is generally agreed that the media play a critical watchdog role against those in public and powerful positions in society, this role is especially crucial in new and fragile democracies in Africa unlike in more mature democracies in the West. The watchdog role of the media is particularly vital in emerging democracies where it has been **argued that where opposition political parties are weak or non-existent owing to state repression, the private press can occupy that role of opposition.** In the case under review, the private media, civil society, the opposition and state-controlled media were arguably complicit in unlawful military intervention in the public and political affairs of Zimbabwe that resulted in the demise of Mugabe. In their analysis of the dual legacy of democracy and the authoritarian role of the media in Zimbabwe, given its colonial history of contested press freedom, Ronning & Kupe (2000) argue that the watchdog role of the press is particularly important in societies where the political parties or organisations have failed to provide an effective opposition to the ruling party such as is the case in Zimbabwe. In such situations, it is doubly important that the press examines the conduct of the rulers and questions how public resources are managed.

Entrenched positions, differences and interests of the two newspapers

Whereas the *Newsday* has always been critical of Mugabe's leadership, the reportage of *The Herald* showed shifts in editorial policy depending on who is under control of the party and government. The coverage of *The Herald* questions

the editorial independence and its public interest role as a public newspaper. The public interest is compromised by the partisan interests of those in charge. While *Newsday* sought to depict politics of accommodation by giving voices to both oppositional and mainstream voices such as those in ZANU PF, as well as minority groups like whites, *The Herald*, to the contrary maintained its stance of profiling and giving coverage to ZANU PF and leading state actors. However, it is critical to note that *Newsday* only gave space to voices that were sympathetic to Mugabe's ouster demonstrating a level of complicit in the coup. The *Newsday* of November 16 had a headline 'Tsvangirai, Mutsvangwa jets in.' The story sought to portray a country headed for a government of national unity. This portrayal by *Newsday* had a goal to create an idea of a government of national unity – this was not the case. *The Herald,* which had become the official voice of Mnangagwa's faction, and the military demonstrated unwillingness to promote such politics, as it had never given coverage of these two politicians who played a major role in ending Mugabe's power. Both papers failed to give representation of events unfolding in the country, *Newsday* advanced a unity narrative which was never publicly admitted by either party while *The Herald* ignored covering other politicians representing alternative views. We argue that such framing by both papers failed to meet basic journalistic ethics of giving a truthful, accurate and representative view of events unfolding in the country.

The other differences in coverage are the patent interests of the two newspapers on the future of the state post-Mugabe. *The Herald* wanted the continued hegemony of ZANU PF under Mnangagwa while they sought legitimation of opposition and civil society. The *Newsday*, wanted an inclusive government which includes Mnangagwa and the opposition formations of the MDC with a view of stabilising the political economy. The paper critically observes that the two newspapers had two opposite discourses that morphed only at the point of pushing Mugabe out of power. The *Newsday* promoted discourse of democratisation and inclusiveness of the post-Mugabe period, while *The Herald* promoted authoritarian discourses where ZANU PF remains in control of state politics. Therefore, the convergence we observed was rather ephemeral, that facilitated only Mugabe's fall but not permanent transformation of national politics.

Conclusion
Construction of the coup as 'acceptable'
One of the major findings of the study is the construction, framing and coverage of the military coup by both newspapers as 'acceptable'. Both *The Herald* and the

Newsday did not characterise Mugabe's fall as a military coup. They both did not point to the violation of the constitution and the undemocratic processes that took place. From the reportage of the papers on the military role, one can argue that the frames used by both newspapers had a sense that Mugabe was a burden to the nation's political and economic fortunes who deserved to be removed from power by any means necessary. In this regard, this study submits that the two newspapers failed to play their watchdog role, failed to give a truthful and representative coverage against the abuse of authority by the army. The failure by the two newspapers to play this critical role has major implication on media theory and journalistic practices in developing contexts such as Zimbabwe. As submitted by Schudson (2008), in both developed and developing contexts, the media can play critical roles that serve democracy. It is pointed out that news should provide full and fair information so that citizens can make informed political choices. The media can also investigate the concentrated powers of the elected representatives. It can also interpret events with a view to assisting citizens to understand complex issues in their societies. From the cases examined in this paper, it is submitted that such roles were undermined and negated by both newspapers as they lacked any balanced and critical assessment of Mugabe's fall aspects at the core of the social responsibility theory. The roles of the ruling party officials, opposition and civic groups to support a military coup were not scrutinized by the two outlets. While one could argue that Mugabe was no longer popular in both his party and state, the media had a public duty to serve the public interest by critically reporting Mugabe's demise following the due processes of the law. Instead, the two outlets failed to expose ruling party officials who had been in Mugabe's government and its failed policies since 1980 but turned against him at the last hour for political expedience.

For future research, it may be of interest to know how media ownership, especially of private media, has influenced the transition. As Ruhanya's study (2018) revealed, the 'cross-pollination of the political interests of the ruling political elites and the business interests of the publishers to find common ground to facilitate and enhance viability of the papers, financial assistance from donors through donation of newsprint and financial resources and internal cost-cutting measures in the operations of the publications' are some of the challenges that informed media business not only during the transition but more than a decade before the coup. The researchers recommend future studies to look at political-military-business nexus regarding media ownership during the transition to understanding the underlying interests that could have informed a damascene shift in framing, not only the military, but Mnangagwa and his Zanu PF faction.

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Framing economic crisis: Newspaper coverage during COVID-19 in Bangladesh

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Abstract

This study examines how Bangladeshi media frame the economic uncertainty of coronavirus (COVID-19) to understand the absolute scenario of an economic crisis or a disaster through the dominant frames. When keeping people constantly informed through the message of the media, the most important matter is not what is portrayed, but how it is portrayed. Using the content analysis approach, the author intends to analyze a total of 296 editorials and op-ed items in *The Prothom Alo, The Daily Star,* and *The Financial Express* from March 26 to August 3, 2020. Using the 'Media framing theory', six major frames are used to analyze the data. This article finds out that 'crisis' and 'fear' frames dominated the media coverage of the pandemic. Based on the linguistic analysis, this paper also finds that the economic issues of COVID-19 have been over-focused, in some cases the newspapers sidelined the focus from 'health crisis' to 'national economic crisis'. The language of the coverage of economic contents combines hope, human issues, frustration, and social responsibility at varied proportions. The article suggests that the media could mitigate the crisis by not politicizing the economic issues; rather the journalists should focus on highlighting the solution to surpass the economic crisis and help the authority to implement proper policies for keeping the country's economic conditions safe.

Keywords

COVID-19, economic crisis, media framing theory, newspaper coverage, Bangladesh.

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Introduction

The global coronavirus pandemic has challenged the entire world to face one of the most critical periods in its economic history. After the detection of the new virus in Wuhan, China, the coronavirus has been transmitted in 213 countries and territories (Worldometer, 2021) causing a serious economic crisis to the global economy. Besides, the worldwide lockdown has resulted in a serious downturn in the low-income countries and threatened to jeopardize the continuous economic advancement as the pandemic caused 4.9% downfall to the GDP in 2020 and the IMF has counted the economic 'crisis like no other' before ('COVID-19 sparks global', 2020). The emergency situation caused business shutdown and staying at home made the financial activity stop. A recent study has found the public to identify the coronavirus as a huge threat to the economy than that of their health (Oliver, 2020). As a least developed country (LDC), Bangladesh started to face a worldwide economic downturn, and very soon, the country's economic aspiration went on hold. After the enforcement of the countrywide lockdown from 26 March 2020, working people, as well as business industries across the country, seemed to go under economic threat. Understanding the upcoming economic crisis, the government announced on 26 March a total of $600 million stimulus package for supporting the export-oriented industries (Mahmood, 2020). And from that media tries to highlight the overall economic effects more importantly through continuous writings, as it always does the same to construct the view of mass people through its writings about any pandemic situation (Hoque & Siddique, 2020). Therefore, print media continue to play a crucial role by presenting the information to the mass people (Kuppuswamy, 2017). In Bangladesh, after the detection of the first COVID cases, the newspapers began to cover the latest news and thoughts of experts on economic issues. For example, a *Business Standard* story (2020) under the title 'COVID-19 and its impact on Bangladesh economy' gave an evidence of how difficult the country's situation would have been if the lockdown had enforced for a longer period. The story said that Bangladesh could have to face an economic downturn as the pandemic had been going to hit all the sectors of the country. *DW* (2020) also delivered a story under the title 'Coronavirus: Economy down, poverty up in Bangladesh'. In the story, the media admitted that as a result of the COVID-19 pandemic, more and more people were going down the extreme poverty line. Moreover, the export industries, particularly the garments and textile sectors shut down and as result, the production reduced. The downturn of remittance value has also created a serious challenge to the economic growth of Bangladesh. Despite the impact of COVID-19 on the country's economic activities, studies on the

impact of COVID-19 on the economy, particularly in Bangladesh, are still to be conducted. Thence, this study aims to investigate how Bangladeshi newspapers have framed the economic issues with their concerns and shifted their focus on crisis, during the lockdown enforcement.

Literature review

It is presently notable that COVID-19 has affected each part of human life. Specialists' contemplations and observations distributed in papers are featuring, and building up these parts of human lives is pivotal to comprehend. This comprehension and examination can suggest a direction to other national news media to assume dynamic functions in this health emergency.

Mutz (1992) suggests that through the news coverage and the individual encounters, the understanding of the public of the economy is being bloomed. In this way, it turns out to be especially significant to know what sorts of economic data are presented by the media to the people. Haller & Norpoth (1997) show that the media staff tend to highlight the economic news negatively as bad monetary occasions are seen to be published with great attention than great financial occasions. Contamination fear can bring about social distancing or shutdowns of schools, ventures, business firms, transportation, and the public sector, which creates problems to financial and other socially important movements. Worries over the spread of even a moderately contained episode can prompt a diminished exchange. In any event, when the health effect of an epidemic is generally restricted, its financial results can immediately become amplified (Fan et al., 2018).

Kane (2010) writes that common media generalizations about the occupation changes in the economy are being reflected by the policymakers or, in other words, they pay attention to the huge total picture or to updates of extremely huge cutbacks by individual organizations. A report of the World Bank predicted that the Ebola epidemic would have dropped a considerable lot of the monetary additions of Guinea, Liberia, and Sierra Leone years before the epidemic, which was classified as the quickest developing financial term of these countries (Cheng, 1995). Qiu et. al. (2018) stated that due to the SARS outbreak in 2013, China faced a large impact on their society. The spread of rumors caused panic at that time and people were unable to find the relevant information.

The COVID outbreak has also caused panic in all sectors of the world. Pauline (2021), in his study, 'Health is wealth: Newspaper coverage of the economic impact of COVID-19 in Nigeria' describes how newspapers in Nigeria report the impact of COVID-19 on Nigerian economy. Four selected newspapers have

been analyzed with the quantitative research method. The study reveals that the Nigerian newspapers did not make any suggestions on how to tackle the economic issues and paid limited attention on how the country's economy can survive during the pandemic or post pandemic periods.

The COVID-19 flare-up has just begun to influence various parts of the economy. Among these, agriculture, industry and service – the three significant sectors of the economy of Bangladesh – contribute 18%, 29%, and 53% to the GDP of the country respectively, that were seriously influenced by the COVID pandemic (Begum et al., 2020). A study by Norouzi et al. (2020) describes how the coronavirus pandemic influenced the petroleum and electricity demand, both legitimately and by implication in China. The study finds that the shutdown enterprises as well as the service and business areas were also affected.

Another article, 'Discourse of fear and economic crisis: A multimodal analysis of Pakistani newspaper's political cartoons of COVID-19' examines how COVID-19 language of fear and phobia has been presented by a Pakistani newspaper's political cartoons. By using qualitative research method, the researchers found that the newspaper had been trying to criticize the official authorities for the economic crisis due to the COVID-19 pandemic by highlighting the economical uncertainty of the mass people (Aazam et al., 2020).

'Media framing of COVID-19 pandemic: A study of daily trust and vanguard newspapers in Nigeria' was another study to analyze how media narratives were used in the Nigerian newspapers on the COVID-19 pandemic. By analyzing the news under the economic and political frames of COVID-19 of two major national dailies during February to May 2020, the researchers found that the selected newspapers framed the pandemic more economic and political rather than paying attention to health, safety and quality of life frames. The study also found that the tones of the frames were more negative than positive or even neutral (Msughter & Phillips, 2020).

A joint report of The World Health Organisation (WHO) and World Bank assessed that the effects of the pandemic caused generally 2.2 to 4.8% of global GDP downturn, which is equivalent to 3 trillion USD and thus caused a more significant effect (Bakirtas et al., 2000). After the detection of coronavirus cases in the USA, the unemployment rate went down to 3.5% in February 2020, which was the lowest in number within the past 67 years. After 45 days afterward, nearly ten million Americans appealed for joblessness benefits within two weeks (Chaney & Morath, 2020). According to a report of the International Labor Organization (ILO), on May 2020, the economic impact of the pandemic was conveying a 'triple stun' to young people by decimating their jobs, disturbing

their education and training, and making snags to look for or move between occupations.

After the declaration of the COVID-19 pandemic as worse by the World Health Organisation (WHO) on May, the World Bank (WB) in its latest Global Economic Prospects Report prolonged that the global economy may have gone at a downturn pace and in 2020, it would have contracted 5.2%. It would have caused the most profound downturn since a 13.8% worldwide financial withdrawal in 1945-1946 after World War II. Cookson (2020) stated that the unemployment level was lower than in the post-COVID situation as the small entrepreneurs found them in difficulty and thus, a large number of low-income workers lost their jobs. Hawdon et al. (2014) stated that after any pandemic, media coverage may affect negatively on the mental health of its audience.

The economic giants like G-7, who share a total of 65% of the manufacturing, 41% of world exports, and 60% of the world's GDP, have been facing serious damage due to the COVID pandemic and the downturn will follow to the other countries as well (Baldwin & Mauro, 2020). Barua (2020) examined that global connections could be affected by the pandemic by influencing the recent and upcoming economic projects under government to government (G2G) engagement particularly among China and diverse financial systems.

When the COVID-19 emerged in Bangladesh, the economic conditions started to downturn. After that, the Economic Intelligence Unit (EIU) estimated a 4% decline in GDP growth in Bangladesh, which seemed even more desperate, and to overcome the situation individuals' needed to be given the fundamental necessities of life during the lockdown enforcement, which seemed not to be doable in Bangladesh (Mahmood, 2020).

In a study, Kumar (2020) stated that as the Bangladeshi economy has greater independence from China, the outcome of the coronavirus pandemic would likely be more noteworthy for Bangladesh. The export-oriented sectors and the supply chain may be destroyed due to the lockdown barriers to import from China and this would affect the overall trade. Bhuiyan (2020) wrote that if the lockdown had existed longer in Bangladesh, the country would have faced a severe economic crisis. Because of that for a bigger scope, we may need to confront a monetary log jam temporarily while there may be a downturn in the long term.

According to *ADB* (2020), Bangladesh is likely to lose 3 billion dollars in its GDP due to the job cut of 9 million people. A decrease of more than 2 percent during the current financial year was anticipated by the WB and the IMF. This presage seems, by all accounts, to be genuinely sensible given the rising numbers

of COVID-19 contaminations and fatalities the nation is presently encountering and the re-imposition of lockdowns (Mahmood, 2020).

Most of the literature on economic impact of COVID-19 discusses the overall effects rather than conduct the research on print media framing of economic aspects during the pandemic. Some studies discuss the overall effects, some discuss health disasters but very few studies in Bangladesh have been conducted to understand the absolute scenario of economic crisis or disaster after the COVID-19 pandemic through the content of the daily newspapers. This paper can make a bridge to connect that gap analyzing the media's (newspapers) portrayal on the overall economic conditions of the country during the coronavirus pandemic and aims to fill that gap by giving more information about how the national dailies talk about the overall economic situation.

Research background

Bangladeshi newspapers have grown in popularity and influence during the last two decades. These publications have gained popularity among the country's elite, middle class, and decision-makers. With higher purchasing power and improved literacy, newspaper reading in Bangladesh is increasing. With this, the country's newspaper industry flourished fast, as evidenced by the fact that virtually all newspapers are funded by the country's huge commercial conglomerates. According to a recent research titled 'Who owns the media in Bangladesh?' (2021), 32 of Bangladesh's 48 major news outlets are controlled by businesses with a variety of financial interests. As a result, the proprietors use their influence in the press to promote their businesses. As a result, it is a general observation that business stories are frequently covered in newspapers. Furthermore, newspapers publish both commercial and economic news to appeal to a broad audience.

English language newspapers have also been pioneers in reporting business matters, with *The Daily Star* being the first to develop a dedicated business section (initially with four pages and later with eight pages). *The Financial Express* is a business daily in Bangladesh that focuses on publishing economic and business news. Business articles and stories are also included in their weekly and fortnightly sections. Other newspapers are known to publish business news on their business pages. Important economic news is also posted on other pages based on the importance of the news. *Literature, book reviews, health, science, law and order, wide angle, environment, travel*, and other topics are seen to appear alongside the hard news in newspapers.

After the detection of COVID-19 worldwide, the media seemed to have shifted its focus to covering all the issues tagging with the novel virus. Moreover, the

overall lockdown has resulted serious economic crisis in the affected countries, harming the financial system of low-income countries and the emergency has become so serious that Bangladesh is presently confronting a critical period in its economic history and the lockdown brought devastating consequences for the existence of working people, business enterprises and in this way undermining a large number of livelihood across the nation. According to the recent study of Hoque & Siddique (2020), when the newspapers give more importance to deliver the news about the impact of COVID-19, the fear of livelihood increases. Their study on Bangladeshi newspapers proved that the newspapers of Bangladesh frame the coronavirus as a national crisis.

The scenario is proved when the Bangladesh Bureau of Statistics (BBS) says, 85.1% of working people (50 million) are employed in the informal sector and they are assessed to be jobless because of the lockdown enforcement in Bangladesh. According to a local newspaper report, merchandise exports dropped by 61.57% in May this year compared with the last year, which also featured a serious economic threat to the least developed country, where around 20% of the total population live under the destitution line (Mahmood, 2020). After the lockdown enforcement, the newspapers of Bangladesh have tended to analyze the socio-economic effects of all sectors by its writing and the readers found themselves curious, looking for the actual economic scenario of the country from the media presentation. From the media's concerns, national and international policy planners, implementers, and decision-makers would get the outline through the thoughts of newspapers. Therefore, it is obvious to find out how the leading newspapers of Bangladesh saw the economic issues during the COVID-19 pandemic, and how they were shaping the crisis, and analyzing the situation over the global economic downturn. From 26 March to 3 August, 2020 within the lockdown time, how the national newspapers highlighted the national health crisis to the economic crisis can be understood from this study.

The research will attempt to find the following answers:

1. How did Bangladeshi mainstream newspapers frame the coronavirus pandemic as a threat to the national financial emergency?
2. What types of tones were used on economic issues during COVID-19 by the leading national dailies?
3. What kind of economic condition was Bangladesh going to face in the near future?

Recent research has looked at how the coronavirus crisis is portrayed in Bangladeshi media. None of known research focuses on comprehending the economic framing depicted in Bangladeshi publications. The goal of this research

is to figure out what economic frame the Bangladeshi media used to report on COVID-19. The main objective of this research is to assess the economic impact of the COVID-19 pandemic through the tone of the leading national dailies in Bangladesh and to find the answers if the newspapers have the motive to unfold the actual scenario by highlighting the limitations.

Theoretical framework

'Media framing theory' is used to portrait the national economic crisis during COVID-19 in Bangladeshi newspapers. Media can connect the mass audience through framing by portraying the crisis story (de Vries, 2004). Goffman (1974) defined 'framing' as a form of communication and 'schemata of interpretation' which possess the audience to 'establish, ignore, recognize and entitle' incidences. According to McQuail (1994), social reality has been constructed by 'framing images of reality in a predictable and patterned way'. By combing media framing with agenda setting, Entman (1993) believes that readers can increasingly likely understand how and why framing occurs in the media. Agenda setting treats as the primary function of framing as it characterizes the issues meriting of government thought (Entman, 1993). Gamson & Modigliani (1989) stated that individuals can construct meaning by the process of media discourse, and journalists create and crystallize meaning in public discourse through the process of public opinion. Analyzing the previous research, Semetko & Valkenburg (2006) recognized economic consequences, human interest, morality, conflict, and responsibility frames that occur in news reports. Ogbodo (2018) advanced these frames in a follow up research and added ethnicisation and politicization to the list of frames.

Framing recognizes the capacity of the media message to characterize a circumstance and set the issue moving for a discussion (Entman, 2003). Regarding the economic crisis due to COVID-19, framing permits us to recognize how the media approach the coverage of the pandemic (Liu & Kim, 2011).

Entman (1993) defines a paradigm as 'a general idea that guides a body of scholarship on the results and operation of any given system of thought or action,' which he uses to argue that framing is a 'fractured paradigm'. Scholars assert that three paradigms shape communication: constructionist, critical, and cognitive. Academics can use these paradigms to visualize the links between textual frames and framing effects. According to critical scholars, news media purposely select some material while excluding other information so that various frames of an issue either do not exist or continue to encourage a single

viewpoint that supports the status quo. On the other hand, Journalists generally develop meaningfully distinct frames about an issue or occurrence inside a single news item or across multiple items, according to cognitive studies. According to constructionists, journalists are information processors that generate 'interpretive packages' of politically involved sources in order to both reflect and contribute to the topic's 'issue culture'. This paradigm holds that a frame can have long-term dominance over coverage (D'Angelo, 2002). Taking the cognitive paradigms into consideration, this research has been conducted to understand how the economic issues framed by Bangladeshi newspapers reported COVID-19.

In addition, this research aims to examine the language of covering financial issues in the mainstream newspapers of Bangladesh. This study modifies the frames by Semetko & Valkenburg (2006) and Ogbodo (2018) by adding two emerging frames (fear and hope) while ethnicisation, politicization, and mortality frames have been modified to discuss through other frames. Like the frame politicization and ethnicization have been focused to discuss under the frames of hope and fear. Moreover, the morality frame is discussed with the responsibility actors as when moral aspects go under question then responsibility starts from there. To analyze, the researcher attempts to discuss measuring economic consequences, human interest, fear, conflict, responsibility, and hope frames with a special focus on language analysis. Thus, it will be easy to find the actual scenario on how the mainstream newspapers of Bangladesh reported the economic issues during the lockdown.

Methodology

On March 26, the government of Bangladesh decided to enforce the lockdown to the whole nation, which was then extended until August 3, 2020, in different phases. During that time, the print media started to emphasize the coronavirus-related news of which they tended to highlight the upcoming crisis more. Utilizing a content analysis approach, this research intends to analyze and examine the thoughts and concerns of leading newspapers in Bangladesh related to the economic issues during March 26 to August 3, 2020. The researcher considers that this timeframe is enough to reveal absolute information to lead the understanding of the ways Bangladeshi newspapers frame the economic uncertainty of the pandemic.

Random sampling is used to conduct this study. According to the Information Minister at the national Parliament (2018), there are a total of 1,191 national dailies in Bangladesh. Considering the highest circulations and readership,

the researcher selected the three newspapers for conducting this study. The *Prothom Alo* is Bangladesh's most prominent, widely circulated, and widely read newspaper, with about 6.6 million readers every day ('6.6m readership makes', 2018). *The Daily Star* is also included as a sample because it is the most widely read English daily in Bangladesh, with almost 45 thousands circulation ('Bangladesh Newspapers Circulation', 2020), while *The Financial Express* is considered as it is the first financial daily of Bangladesh and ranks second, in English language, with 39 thousands circulation (Media Landscapes, 2021). This study focuses on analysis of the editorial and op-ed sections on three leading dailies in Bangladesh: *Prothom Alo*, *The Daily Star*, and *The Financial Express*. The editorial and op-ed sections reflect the thoughts of the particular newspapers and can frame issues and events that the community may be involved in. 'It encourages public discourse in an open forum of ideas which fosters the involvement of the community so importantly to the effective activities of government and democracy at all levels' (Coifalo, 1998). Hynds (1976) wrote that the newspapers identify issues and advocate causes in their editorials, and serve to the public for the discussion of issues of public concern in their letters to the editor and columns.

A total of 296 editorial and opinion writings have been identified to analyze. All the contents have been taken from the online version of the selected dailies, where the printed versions have been archived. The data were collected by observation method and note taking technique. This study found that 63 editorials and op-ed have been published by the *Prothom Alo*, whereas 141 and 92 items have been published by *The Daily Star* and *The Financial Express* respectively.

This study looked at the business and financial news in Bangladesh and determined how prominent it was in comparison with other news during the pandemic. This research devided the editorials and the thoughts of the experts into six major frames. To analyze, researcher has recognized the economic aspects that cover the frame of economic consequences, human interest, hope, conflict, fear or crisis, and the frame of responsibility as well throughout the qualitative analysis. The author attempted to get some answers from the story summaries to determine the extent to which certain frames exist in stories. The following questions have been set: is there any mention of financial losses or gains now or in the near future? (Economic), does the story highlight on how individuals or groups are affected? (Human interest), are there any reflection of disagreement with political or other parties? (Conflict), does the story present some rays of hope? (Hope), does the article suggest some sought of

government responsibilities or the responsibilities of others? (Responsibility), or does the story create panic among the mass? (Fear). This paper investigates these questions if they appear in the stories and try to find the specific articles by determining the particular answer. The researcher utilized a combination of observation and note-taking procedures to acquire the data. However, this paper aims to analyze the sampling contents by using these frames and shaping them to the language analysis.

Analysis

This research found that from 26 March to 3 August, there were a total of 117 editorials and 179 opinions published in the selected newspapers. Economy, employment, industry, production, supply, budget, and institutional issues were focused on the editorials, where the newspapers tended to highlight the economic aspects with positive and negative impacts. Immediately after the lockdown enforcement, newspapers highlighted the struggle of different industries, struggle of the working people first, then after a while they shifted their focus on economic shortage and started to discuss the budgetary impacts and tried to examine the effectiveness of stimulus packages offered by the government of Bangladesh. Through the framing, the researcher finds the newspapers highlighted the 'economic consequences' (a total of 98 issues) most, and the frame on 'fear' (a total of 57 issues) and 'human story' (a total of 55) found almost the same in number. The study also finds a total of 38 issues under the 'conflict' and 'hope' frame and 19 issues have been found on the frame of 'responsibility'.

Table 1

Number of frames / Newspaper	Prothom Alo	Financial Express	The Daily Star
Economic consequences	16	39	43
Human Interest	17	17	21
Conflict- local corruption	6	9	23
Hope	3	13	13
Fear	12	12	33
Responsibility	9	2	8

Economic consequences

In this frame, issues have been reported by the newspapers that focused the economic frame into positive (gain) and negative (loss) categories (sub-frames). The positive consequences focus on the issues related to economic benefits (stimulus packages or other facilities by individuals, organizations, or by the government) to reduce the loss of the pandemic on the country's economy.

From this study, the researcher has found the newspapers giving the highest priority in economic impacts. Among the newspapers, *The Financial Express* has published more items (39 items among 92), whereas *The Daily Star* has focused 43 items on economic consequences among 141 issues and the *Prothom Alo* has 16 items, which is the lowest in number. All of the newspapers addressed the economic matters as a matter of worry and in some time presented the economic downturn, which may create panic among the public. On the early days of the lockdown, *The Daily Star* tried to focus the government's initiatives to save the country's economy through its writings. For example, on April 9, 2020, the daily published an op-ed praising the government's initiative of announcing the second stimulus package for the affected sectors and urged to utilize the packages properly. Almost two weeks before, on March 27, a day after the lockdown enforcement, the daily published an editorial asking for essential assistance for the urban poor and the people of the informal sector. The national economic downturn has also been analyzed against the global economy. Economic priorities, production, vital issues were also discussed; the issues on migrant workers, the role of micro-enterprises, and the overall economic fallouts were presented in this newspaper.

On the other hand, *The Financial Express* highlighted the economic pressure during the pandemic and tried to publish various opinions and editorials on its overall impacts. The opinion from May 6 concerned that the lockdown has put the economic conditions of people who lived under the poverty line at risk. The daily had set the tone like,

'…What is required now is a new deal that guarantees social protection against negative economic consequences of the pandemic, and that builds a stronger social safety net framework for the future.'

The daily had also set a budgetary analysis on different sectors during the pandemic as the government of Bangladesh has allocated the fund for 2020–2021 on June 2020. The daily identified different sectors like SMEs, textile industries, and macro industries as those would be the sectors to overcome the situation. Overall, in the editorial, the daily implied the fears over possible damage during the pandemic. *Prothom Alo* at the same time highlighted the possible damage

to the agricultural sector and asked the government to take proper initiatives to save the agro-economy of the country. On May 20, the highest circulated vernacular daily wished to save the downturn economy by providing the proper stimulus package to the farmer and urged the concerns to confirm the fair price of the agricultural goods. The daily had also raised its voice to ensure proper budget to the proper industry to tackle the economic downturn of the country during the COVID-19 pandemic.

Fear frame

Fear sometimes can create panic among the public, and sometimes spreads quicker than a pandemic. And the media acts as the front liner to disperse fear among its audience through its reports and writings.

After the detection of COVID-19 in Bangladesh, almost all the media started focusing their attention to cover corona issues as their first priority; whereas most of them have indicated it as a 'threat' for the country. Analyzing the content, *The Daily Star* found more concern to highlight the threat and crisis, which may cause 'fear' among the readers and the public. The researchers found *The Daily Star* had published 33 items indicating fear that shows the newspaper to put second-highest attention after economic issues. On the other hand, the vernacular daily *Prothom Alo* (12 items among 63) and *The Financial Express* (12 items among 92) put almost equal attention on setting the fear frame.

Indicating the crisis, on March 27, an op-ed was placed on *The Daily Star*, and the tone was the following:

'…*Supply chains will be disrupted and higher prices will be demanded. Most fundamentally, people will have less money to spend and consumer demand will contract.*'

Here we see the element 'crisis' which may cause panic. A month later the daily described the situation with another opinion: '*How hard will the poor be hit?*'

In its op-ed section, the daily considered 'crisis' as 'fear' which has a catastrophic impact on the people who are basically considered as 'non-poor but may face a negative income shock. Mentioning Household Income and Expenditure Survey (HIES) data of BBS the daily incorporated that this crisis may create more poverty, estimated into 40.9% in the country. Though the media may unintentionally create fear, the important fact is that the overall situation has made the newspapers set the tone to report on the crisis. In the opinion and editorial section, the highest circulated English daily (*The Daily Star*) has portrayed that the RMG industry, the aviation and tourism sector,

migrant workers, and the financial industry were also going to face a huge crisis, that could spell danger for Bangladesh.

The Financial Express also portrayed the danger of economic conditions during the lockdown and their tone did shape the fear as well. In the second week of the lockdown enforcement, the paper wrote that the small business had started to struggle hard to somehow survive. This puts the readers (as well as the public) into fear of economic conditions. Framing the term 'fear', this daily also published another op-ed titled, *'Fearing shrinking remittance inflow'* on April 6, that also described the scare situation of economic conditions of the country. The paper claimed the government had not taken proper steps in that 'desperate' situation. The migrant workers' return, illegal capital overflow during the pandemic, and lack of ensuring food security were also the concerned issues focused on by *The Financial Express*. These have further increased the people's fear. On the other hand, the largest circulated daily *Prothom Alo* has framed the fear by highlighting the upcoming threats on the agricultural sector and the threat on the lower-income people. On April 9, the daily set its tone the way that Bangladesh was on the verge of danger due to the pandemic and the country was going to face a great threat in near future. In this case, media reports are not the only reason to share the fear with the public, but the public faced the situation in real. Nevertheless, overhyping the situation by the media is a reason to take the public to the stressful conditions.

Human interest frame

The media outlets in Bangladesh have presented a large number of COVID-related human stories with a soft standpoint showing the crisis in another outlook where the stories have been presented through the emotional angle, which makes the stories more human to the readers. While the number of COVID-19 cases started to rise in a large number, the sufferings of low-income people shown an increase as well. The jobless situation has made people hopeless, the heartening situation increased and in some cases, the lower-income people had to starve due to the lockdown enforcement. The selected newspapers presented human stories with great attention. The researchers found *The Daily Star* to have published 21 items related to the human story, whereas *The Financial Express* and the *Prothom Alo* published 17 items both on this issue. The newspapers put their interest to show the hardship of lower-income people like farmers, day laborers, slum dwellers, small entrepreneurs, migrant workers, and so on. Salary complexity of working people, the inexpressible condition of migrant workers, as well as the shortage of foods affects the people and thus the newspapers displayed these with a pity.

Still, within the human interest frame, the unbearable condition of Rohingya refugees in Bangladesh was given a great attention by the newspapers. The lockdown put the low-payed people in a critical situation, which was repeatedly sought out by *The Daily Star*. For Example, on April 6, 2020, the English daily published an editorial highlighting that food and financial assistance needed to be distributed among marginalized people.

Conflict frame

By analyzing the content, the researcher finds that in some cases the economic conflicts on COVID issues were blasted, where the media outlets tried to explain the challenge. Corruption, confusion, or wrong economic initiatives of both government and industries were identified to discuss the conflict frame here.

The pandemic was not just a health crisis, it also created much confusion among the countries. The media from the very first tried to pay attention to its devastating role, whereas in some cases the media set many contradictory conflicting questions. From this study, the researcher got *The Daily Star* using more conflict terms than the other two (*Prothom Alo* and *The Financial Express*). Depressions, anger, helplessness, inertness, false statements reflect the range of emotions that seem to be highlighted by the newspapers. The lockdown model was imported from the developed countries with strong economic bases. On April 17, *The Daily Star* questioned in an op-ed, whether the lockdown enforcement was the only way forward for us or how long it should have been hold down. 'Hopelessness' increased as a result, which in a sense made a conflict presentation by the newspapers whereas they were also asking the government to shut down everything repeatedly at the primary period of the detection of coronavirus patients within the country. In a sense, COVID-19 created political, economic as well as ideological conflicts in the country. The government had to face questions on enforcement of lockdown; where the health concerns urge to continue the tight lockdown, but in some cases to reduce the economic losses, the country had to carry on the lockdown on a 'limited basis'. On May 12, 2020, the researcher found *The Daily Star* to have adopted the concept of enforcing lockdown on a 'limited basis' highlighting the suffering of the people. The *Prothom Alo*, on the other hand, seemed to have shown a dilemma on the duration of lockdown enforcement. 'Less quarantine', 'public sufferings', 'budgetary analysis' took place on different aspects; where the newspaper seemed to have supported the government's initiative in some cases if it is in some cases be like to unacceptable. The conflict terms have also been found in the reporting of *The Financial Express*. The daily has thrown confusion if the

Ready-Made Garment (RMG) factories need to be opened or not. The daily, opposing the government's steps reports on April 29, '….*things do not look all right as they seemed only a couple of days ago.*' 'Anxieties' and 'uncertainties' are the common issues, in which no one knows where the country's economies were moving to and these created confusion on the government, the think-tankers, the public. Thus, the media gripped the situation and was unable to put a clear stand on some issues that were being described within the conflict frame.

Hope frame

Sometimes, positive news gives the public hope even in the situation of such a crisis. Among the issues, there are several items where the newspapers shift their focus to highlight the solution of overcoming the economic crisis, which in some cases may create hope among the public. The media coverage accentuating hope in such kind of demolishing period can minimize the fear of the pandemic. The figure of frame demonstrates that the highest circulated vernacular daily *Prothom Alo* put less intention to report on positive aspects that may raise hope among the public. Among the selected items, the researcher sees that the *Prothom Alo* published only three related materials on its editorial and op-ed whereas *The Daily Star* and *The Financial* Express are seen to have published more editorials that portray trust among the public in managing the outcome of the pandemic. *The Daily Star*, in one of its editorials, writes that '*Strengthening digital economy is the way to go.*' Tanjir Hossain, in an op-ed in *The Daily Star* on May 4, writes that '*despite lockdown, the country is on the way to ensure food security, which raises hope.*' *The Financial Express* also reports positively and this shows a ray of hope during the pandemic. On June 7, the daily publishes that, '*hopes still abound for an economic turnaround.*' The formula of overcoming health and economic crisis, the immediate measures are taken by the government; as the special stimulus packages, helping the businessmen to reopen their business, gear up efforts, and creating more economic opportunities to the damaged sectors are described as a welcome move by the newspapers. In this sense, the words like, 'opportunities', 'recovery', 'security', 'economic sustainability', 'strengthen' are seen to be used repeatedly to address the hope for the best against the pandemic. Similarly, the *Prothom Alo* is seen to show optimism in its editorial and it also puts some way to recover the economic loss that creates hope to win against the virus. On May 12, the daily writes that, '…*the Coronavirus pandemic has been showing some positive aspects making people more concern on putting positive human qualities.*' Despite showing the distress

and crisis, all the dailies have tried to frame hope by avoiding the worst things and portraying the positive views through its writings.

Responsibility frame

In this situation, every sector of the country including the government, groups, or even an individual have to take a particular responsibility to overcome the crisis. And media, as the fourth power, have also some responsibility to find out the proper solution. Considering this frame, the researcher found the newspapers to have written less number (a total number of 19 among 296 items) of this frame among all the frames discussed in this paper.

Usually fear and panic increase a lot among the mass public during such kind of pandemic. The responsible authorities like the politicians as well as some key opinion leaders used to say to the public that hard immunity is the only solution to win the battle against this invisible enemy. Fraud business related to COVID protective elements (tissues, hand sanitizers, face masks, medicines, etc.) started growing fast. Due to lack of confidence and proper knowledge, panic increased among the mass people as they started buying groceries and sanitizers. The newspapers in that situation started raising their voice. The *Prothom Alo* repeatedly asked the authorities to take necessary steps and responsibility to minimize the harm. For example, on March 29, the daily wrote that the government has to take six or 12 months plan to tackle the worst situation. Resisting corruption, protecting the poor, solving the unemployment problem, and distribution of relief should be well maintained the vernacular daily urges. On the other hand, *The Financial Express* showed less attention (2 items among 19) than the other two. This daily in its two items wrote that saving lives and protecting livelihoods should have been the major concern whereas joint efforts are needed to overcome this critical situation. Similarly, *The Daily Star* put its thoughts by some (8 items among 19) editorial and op-ed placement. For example, on April 14, the daily in one of its op-ed sections reported that *no one should die without care*. The writing blames the authoritative initiatives and suggests protecting the public through proper planning.

Findings

This research explains how the mainstream national dailies describe the economic impact of global coronavirus in the country. However, the selected national dailies seem to highlight the national economic crisis in such a manner, where fear is caused and the panic may increase among the concerns. The contents presented by the newspapers were more focused on long-term economic

crisis as all the three newspapers are found to focus the news frame on economic consequences most followed by the fear frame. To minimize the fear and panic, the newspapers are also seen to have written editorials and published op-eds on some issues related to economic prospects which are identified as a hope frame. Though the other two frames are used in few cases, the writings also proved the responsibility of the news media. By the editorials, the news media presented the coronavirus as the national economic threat, and transparency about the news facts for increasing awareness to the public, government, and policymakers are found. During the lockdown, some economic-related issues like employment, production, remittance, investment, industries, food security, and GDP growth have been placed in the newspapers from March to the whole lockdown period. Thoughts of the experts and consciousness identified with awareness and institutional issues were presented within the entire selected period in all three newspapers. Social issues, positive messages, and humanity were reflected with great concern in these newspapers.

The initiatives taken by the government during the lockdown were also criticized by the newspapers and they asked the government as well as the policymakers to improve financial facilities for maximizing the economic value of the country. This research has also tried to find out how the national print media descanted on the economic aspects of the country in the near future. Most of the editorials blamed the governments' initiative, in some cases throw questions on the initiatives taken by the authorities, and repeatedly urges to monitor supply chain facilities properly. Analyzing the newspapers content the study finds that the global economic uncertainties may also affect the country's economy. As a result, export demands will decrease and local investment may be cut down. Unemployment problems, negative remittance flow, disrupted supply chain, shortage of food are about to be limited and may put the country's economy under pressure.

Conclusion

This research investigates the domination of six news frames identified in early reviews on framing effects by analyzing a total number of 296 editorials and op-ed items in three selected dailies. It disclosed that all the items are more focused on economic content and the newspapers portray those frames as economic crisis. Based on the literature review, this study is aimed to understand the dominant frames accepted by the national dailies to report on the financial aspects of COVID-19. Moreover, this article tends to know the overall language of the national newspapers of covering the impact of this dreadful virus. Proper

knowledge on basic health care and safety issues were seen to have been discussed as the most rated issues from the detection of COVID-19 in the country. Later, the pandemic has thrown challenges to keep the economic growth steady. In this sense, the media has to focus its attention on many diverse aspects including public health awareness as well as economical matters regarding COVID-19. Analyzing the content, the author finds out that *The Daily Star* newspaper discussed the economic aspects more than the other two. On the other hand, as a most read vernacular daily, *Prothom Alo* tends to show less attention to the economic consequences but it paid attention to the frame of human stories and urged the authorities to stand by the people of low-income, as they were the major sufferers during this pandemic.

This research provides pragmatic evidence for understanding how Bangladeshi newspapers report on the economic impact of COVID-19. The author comes to conclusion that in reporting on the economic impact of COVID-19, the newspapers make fewer suggestions on how the economy can overcome against the threat. This research suggests that media itself can play a strong role to minimize the harm and it should work closely with the government by maintaining its watchdog role properly. Furthermore, it will be difficult to find out a conclusion over this issue that the pictures of the media on economic issues are the only scenario and it is the only responsible for the media and the journalist to find out the solution to overcome the crisis. Strong and effective economic policies should be implemented properly to save the economic loss and keep the country's economic momentum going. The result of the study could be used to design and implement policies relating to the role of the media in economic development. Additional research is also needed to interview the journalists and communication experts for understanding the communication strategies of post-COVID-19 economies. Furthermore, this study suggests conducting other studies to examine how the business enterprises have been tackling the challenges posed by COVID-19.

Limitation of the study

This study focuses on newspaper stories rather than the public's reaction to the topic. To fill the void, more research on public response is required. Questionnaires and in-depth interviews can be used to find the study's extended output. Nonetheless, this article analyses the economic situation during the lockdown and should help clarify the prominent frames of the COVID-19 economic crisis.

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