

## PAPER

### **What images are communicating about the COVID-19 pandemic?**

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#### **1. Introduction**

The coronavirus disease (COVID-19) pandemic made science become an international public sphere. In this time of mass communication, the world was under the attack of so many newspaper articles written and so many images posted on news portals. During the period of the COVID-19 crisis, images presented in a virtual environment were pictures of reality. Visually presented information can easily reach the target audience, transmitting a message that is not always obvious. Hidden meanings are often not known to viewers. The level of their visual literacy defines the way they are interpreted. Consumers were bombed, during the pandemic, with visual content and infodemic. Fake news and misinformation became prevalent in the age of (social) media, as it was written in *The Lancet infectious Diseases*. The research aims to analyze the graphic elements of images published during the COVID-19 crisis. The study aims to determine how visual information about COVID-19 was presented on news portals in Croatia from March 15, 2020, to December 30, 2021.

#### **2. Theoretical framework**

Globalization is part of capitalism and our everyday life. The development of information technology enabled mass communication between media and people. The latest global pandemic caused by the COVID-19 virus was accompanied by every media in the world. Media helped to mitigate early pandemics by building mass consciousness and those consciousness-building campaigns were largely dependent on the media, such as newspaper portals (Biswas et al 2022). Visual presentation of information aims, as with any other communication, to communicate. Viewers' or consumers' understanding of visual content differs depending on their visual literacy level. Many examples from the past suggest how the manipulation of the masses is gained through images, whether the reason for that is good or bad.

“Media design, primarily visual communication design, plays an essential role because various infographic media, banners, posters, billboards, and other visual communication media can play an influential role in delivering information, publications, and education to the public. Visual communication design studies the science of delivering messages (communication) using visual

or visual elements. Segmentation is critical in visual communication design so that it is right on target and effective following the character of the audience want to target.” (Ilma et al 2021)

The World Health Organization (WHO) recognized the importance of visual presentation. They gave suggestions for making any awareness campaign on COVID-19 visually. They suggested that media can expand their capacity to comprehend WHO’s messages by giving specialized images, so it becomes clearer. Data illustrations and other visual portrayals of figures assist individuals with understanding data by supplementing or replacing text with images (Biswas et al 2022). In similar research that was done by Hamaguchi et al., it is shown that visual aid has become important help for any nation to flatten the curve. The authors concluded that the power of visual language is a valuable and versatile currency to facilitate public health. In similar research, done by Martikainen and Sakki, the aim was to focus on the visualizations of COVID-19 collected from the two largest Finnish newspapers. Their analysis of visual rhetoric showed how visual strategies were used in images to construct a particular stance regarding different age groups and create subject positions for these groupings to direct perception and contribute to meaning (Martikainen, Sakki 2021).

About the fundamental role of design and visual communication at the time of the COVID-19 pandemic wrote author Jurišova, wrote:

“Design and visual communication comprise the crucial power in solving multiple challenges, including restriction and regulation announcements connected with the novel coronavirus pandemic.”

Also, in her paper, author Jurišova, points out that the designer, with the correct solution, can create and add value to the items and services, e. g. to communicate important messages to citizens in the times the COVID-19 pandemic (Jurišova 2020).

Although the WHO, as well as many scientists, recognized the importance of COVID-19 visual presentation and tried to bring the importance of images to people through the emergence of mass communication, a lot of unverified information appeared. Numerous authors have written about the issue of misinformation.

“Fake news proliferation increased during the COVID-19 pandemic worldwide, ranging from topics related to the virus itself, remedies or cures to government strategies and policies related to lockdowns, school closures, etc.” (Balakrishnan et al 2022)

Some of their research results showed that key motives for fake news dissemination are low belief in science and low trust in government. But, on the other hand, high trust in social media. (Balakrishnan et al 2022). Because of the lack of trust in science, many scientists have started using infographics to regain trust. The authors also recognized the importance of infographics. They stated that an infographic is a form of presenting information that is designed by combining

visuals with text. This type becomes a form that allows the reader to easily understand a series of complex information. (Adi, Setiautami 2021)

The importance of images and visual presentations of science in the pandemic was also recognized by authors Delicado and Rowland.

“The pandemic has generated its peculiar images. Doctors are hidden behind extensive protective gear, row upon row of intubated patients in hospital intensive care units, nervous officials presenting the tally of the day for infected and deceased, empty streets in usually busy cities, and masked citizens queuing for the supermarket in addition to graphs and maps charting the unstoppable progression of the disease, hunched scientists on laboratory benches rushing to produce reliable tests or effective vaccines, and the virus itself, a coloured blob covered in menacing nail-like spikes.” (Delicado, Rowland 2021)

The authors' study was focused on Portugal and Spain. Their research sample was government health departments, government science bodies and news portals. Their news portals showed a wider diversity of content in images.

“[...] the Portuguese newspaper website has created a whole section dedicated to the new coronavirus where the vast majority of images were found [...]. The second most frequent kind of image concerns people, mostly in a photographic format, in articles mentioning risk groups, testing, cases and fatalities, and immunity. There are just two identifiable persons, the head of the Directorate General of Health and a famous footballer infected with COVID-19. [...] The third most common type of image represents hospital scenes (usually showing doctors and patients).” (Delicado, Rowland 2021)

### **3. Research**

#### **3.1. Research questions**

This study addressed the following research questions:

1. How visual information is presented on Croatian news portals during the COVID-19 crisis?
2. What are the most common themes in photographs?
3. Which graphic elements are used in infographics?

#### **3.2. Methodology**

The methodology used was Visual content analysis (Bell 2002). The research sample consisted of images published on the five most popular Croatian news portals: 24sata, Index, Jutarnji, Net, and Večernji list.

The research data were gathered and validated in a customized Web application (Selthofer, Jakopec 2014). Categories and properties in the analysis are created based on previous research in the field (Rose 2012). Image elements from the research sample were infographics and photography. Photographs from the research sample were marked as figurative or abstract

images. Figurative images were analyzed and assigned to one of the following categories: person, building, nature, or artefact. Figurative images of people were further analyzed through different properties: gender, age group, social status, and social distance. Graphic elements of the infographic were analyzed regarding the most prevalent colour used and content.



Figure 1. Web customized application.

### 3.3. Research Results

The research data collected through the study contribute to the knowledge of visual communication characteristics during the COVID-19 crisis on news portals in Croatia. Research results have shown that 376 unique photographs (only 1 abstract) and only 75 unique infographics were presented in the research sample (Figure 1). Only 1 Covid-related image from the research sample is abstract. Other 375 are figurative. (Figure 3)

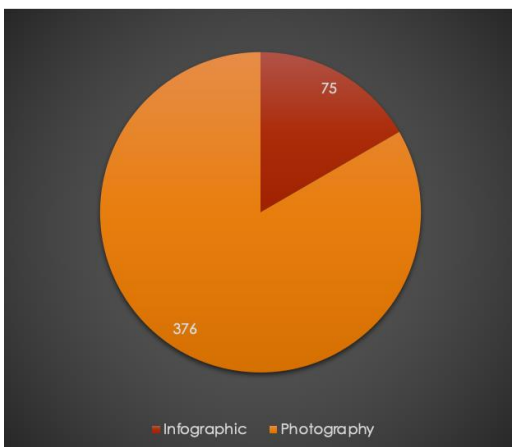


Figure 2. The research sample.

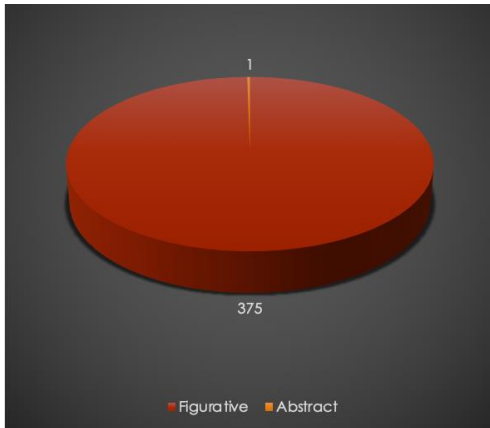


Figure 3. Photography types from the research sample.

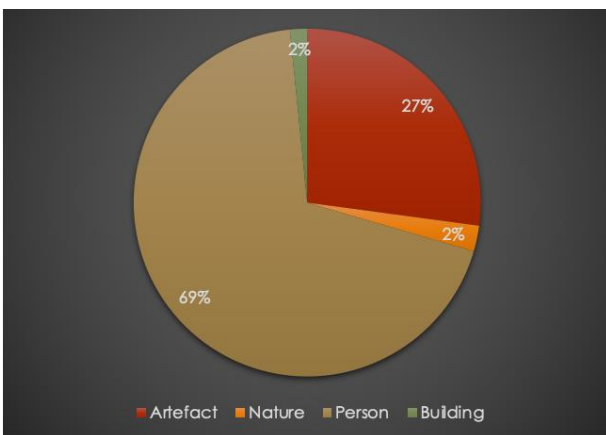


Figure 4. Themes on figurative images from the research sample.

The research results have shown that the majority of figurative images presented during the Covid crisis on news portals in Croatia were figurative images of persons (69%). Artefacts were presented in 27% of figurative images. Only 2% of figurative images presented nature or buildings. (Figure 4)

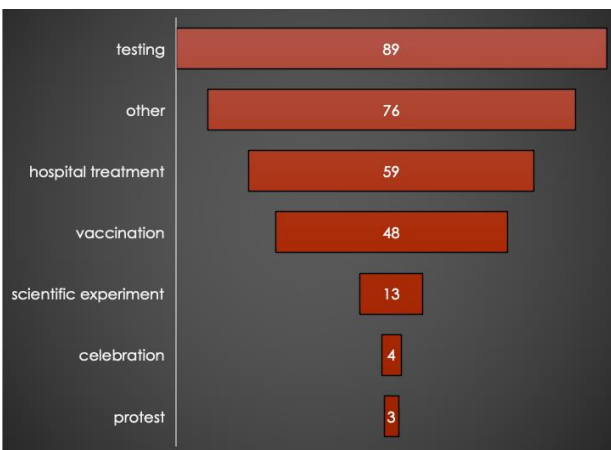


Figure 5. The themes of figurative images from the research sample.

As it is shown in Figure 5. most of the figurative images from the research sample (89) are presenting COVID-19 testing. 76 images were tagged as “other”, meaning that could not be marked as either category. Most of them were photographs of people taken from behind in the street.

People in photographs were mostly mixed gender (Figure 7) and wore protection on their faces and body, so it was difficult to determine their age (Figure 8). Males and females were almost equally present in the photographs from the research sample.

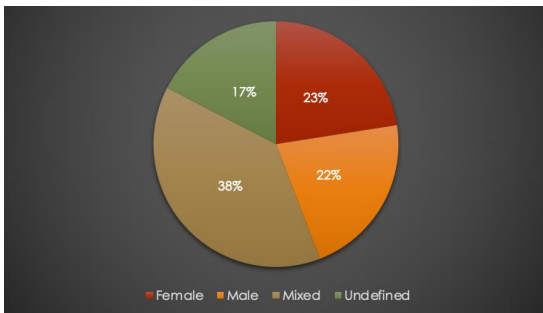


Figure 7. Figurative images of people – gender.

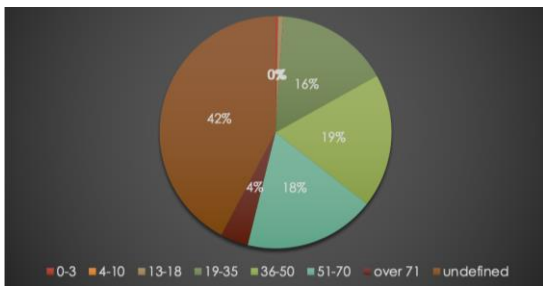


Figure 8. Figurative images of people – age.

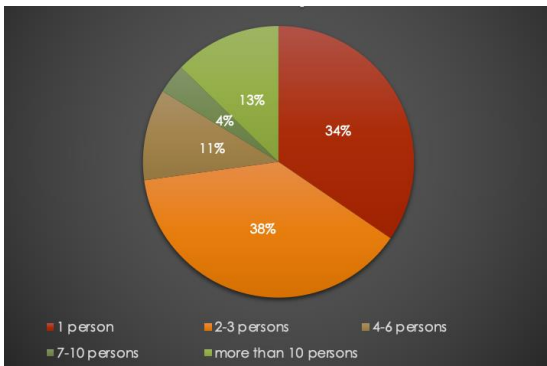


Figure 9. The number of persons on figurative images from the research sample.

As research results show, most figurative images from the research sample present 2-3 or 1 person. (Figure 9)

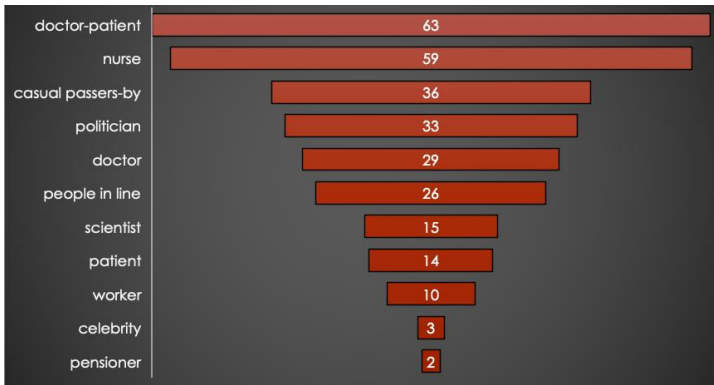


Figure 10. Status of the persons on figurative images from the research sample.

Most of the Covid-related photographs published on news portals in Croatia were representing doctor-patient status in, as previous research results have shown, testing or vaccination situations. Nurses or casual passers-by were also often status. Interestingly, politicians were more present in photographs than doctors or scientists. (Figure 10)

The social or public distance was the most common in photographs from the research sample. Intimate social distance is less presented in the photographs. (Figure 11)

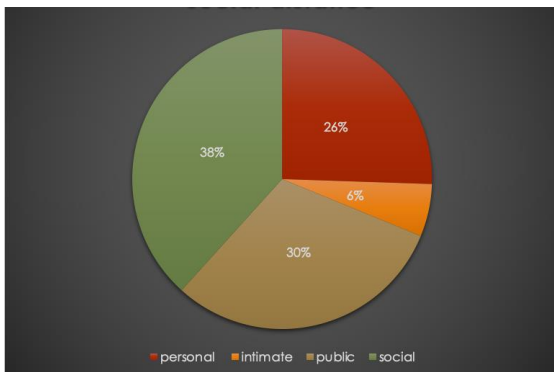


Figure 11. Social distance of the persons on figurative images from the research sample.

Several images from the research sample present artefacts, mostly Covid-19 tests, signs or vaccines. (Figure 12)

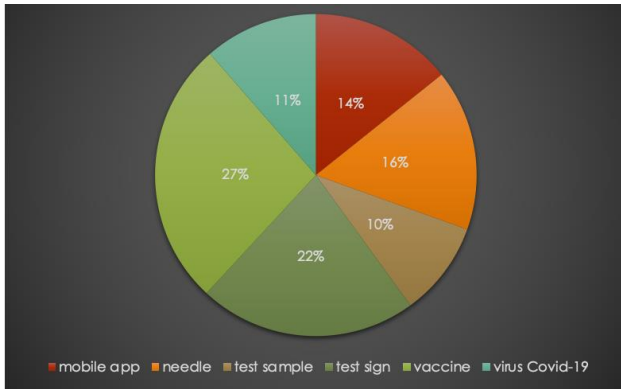


Figure 12. Artefacts on images from the research sample.

There were only a few images of the buildings in the research sample. Some of them present airports, churches or hospitals. (Figure 13)

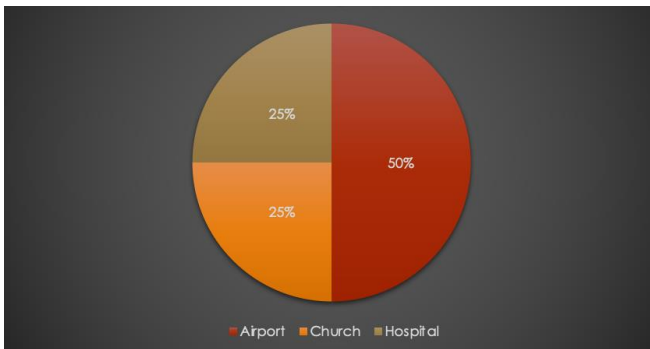


Figure 13. Buildings on images from the research sample.

Infographics on news portals from the research sample were simple, mostly maps presenting the COVID-19 situation in the country, Europe or the world. The colour of infographics is mainly black/white or primary colours (red, green and blue). (Figure 14)

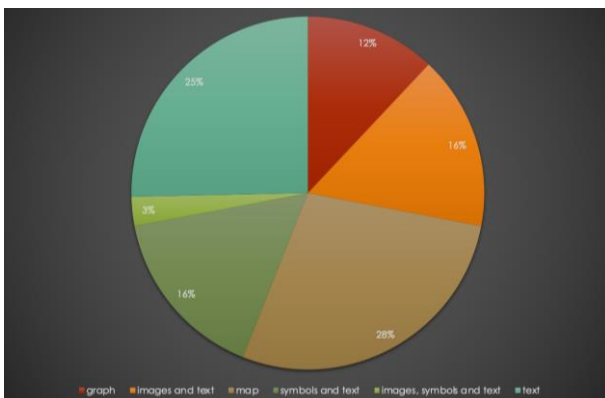


Figure 14. Content on infographics from the research sample.



#### 4. Conclusion

The digital environment has changed the way visual information is presented and delivered to the viewer/consumer. Easily editable shared and distributed visual information, in form of photography or infographics, in time of the COVID-19 pandemic is a weapon for informing, and education, but also for manipulation and infodemic.

The study analyzed graphic elements of photography and infographics on news portals in Croatia during the COVID-19 crisis, trying to answer the research questions.

The research results have shown a lack of infographics in the research sample and domination of photographs. Themes on photographs of COVID-19 were repeated over and over during the time, across the portals, leaving the viewer with very little knowledge of what is behind them. Regards to WHO's recommendation, which states how media can use certain images to help consumers get clearer information, it is obvious that Croatian news portals didn't follow that suggestion. The research results, in comparison with the results from the authors Delicado and Rowland, showed that there are not many differences in image presentation on news portals in Croatia and Portugal and Spain. Croatian news portals have fewer infographics and much more photographs. Images mainly present hospitals and doctors, and often politicians. Similar results were found in the mentioned article.

This research showed some facts about pandemic visual communication, but there are still some aspects that can be covered in further analysis. The main element in visual communication on news portals are images but clearly, they haven't followed WHO's recommendations about using an infographic. It is expected that further analysis of Croatian news portals' visual communication in the following years could show much more results that are the correlation between the usage of infographics and images. Using infographics in times of pandemic should be more visible because it could provide more useful advice to citizens.

#### REFERENCES

Ad, D.; Setiautami, D. 2021. *Distributing information through an infographic on tempodotco to build understanding and awareness about the COVID-19 virus in Indonesia*. IOP Conference Series: Earth and Environmental Science, 729.

Balakrishnan, V.; Abdul Rahman, L.H; Tan, J.K.; Lee, Y.S. 2022. *COVID-19 fake news among the general population: motives, sociodemographic, attitude/behaviour and impacts – a systematic review*. Online Information Review 17.

Bell, Philip. 2002. *Handbook of Content Analysis* (Eds. Van Leeuwen, Theo; Jewitt, Carey). London, Sage Publications.,12–34.

Biswas, Arnab; Ahsan, Ali; Hasan, Mahmudul. 2022. *COVID-19 Awareness through Visual Communication: A Comparative Analysis on the Facebook Pages of NGOs and Media in Bangladesh*. SAJSSH 3 (4): 37-61.

Delicado, A.; Rowland, J. 2021. *Visual Representations of Science in a Pandemic: COVID-19 in Images*. *Frontiers on Communication* 6 (5).

Hamaguchi, Ryoko; Nematollahi, Saman; Minter, Daniel J. 2020. *Picture of a pandemic: visual aids in the COVID-19 crisis*. *Journal of Public Health* 42 (3): 483-485.

Ilma, N.; Hidayat, P.A.W.; Setiono, D.; Prilosadoso, B.H. 2021. *Role of visual communication design as effective COVID-19 information and education media for the community*. *International Journal of Social Sciences* 4 (1): 148-152.

Jurišova, Vladimira. 2020. *The fundamental role of design and visual communication at the time of the COVID-19 pandemic*. *Marketing Identity* 1: 226-232.

Martikainen, Jari; Sakki, Inari. 2021. *How newspaper images position different groups of people about the COVID-19 pandemic: A social representations approach*. *J Community Appl Soc Psychol* 31: 465-494.

Rose, Gillian. 2012. *Visual methodologies: an introduction to researching with visual materials*. London: Sage Publications.

Selthofer, Josipa and Jakopec, Tomislav. 2014. „How can customized IT system support qualitative methods in Website validation: application for visual content analysis.“ In S. Faletar Tanacković and B. Bosančić (Eds.). *Proceedings of the 13th International Conference Libraries in the Digital Age (LIDA)*, Zadar, 16–20 June. 157–162. Retrieved from <http://ozk.unizd.hr/proceedings/index.php/lida/article/view/119/216> (Archived by WebCite® at <http://www.webcitation.org/6xiUBYtef>)

*The COVID-19 infodemic: editorial*. 2020. *The Lancet Infectious Diseases* 20 (8): 875.