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A PILOT TOOLBOX AGAINST HEALTH MISINFORMATION THE CZECH REPUBLIC IN THE COVID-19 AGE

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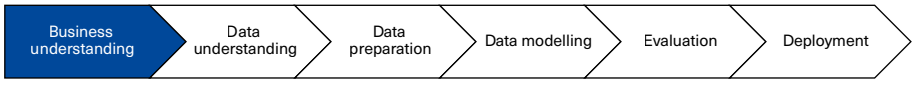
CRISP-DM CRUCIAL PHASES



GENERAL INFORMATION

Year	2020–2022
Keywords	Infodemic, misinformation, COVID-19, pandemic, media
Research question	How can disinformation be systematically countered using correctly interpreted data?
Type of result	Static analytical report
Level of data processing	Advanced analyses

DATA TO DOWNLOAD

INTRODUCTION

One month after the Chinese authorities released the first information about a hitherto unknown respiratory disease that affected dozens of people in Wuhan at the end of 2019, the World Health Organization (WHO) issued Situation Report No. 13, which contained a short chapter "Managing the 2019-nCoV 'infodemic'" [1]. The Introduction of the document of 2 February 2020 stated: "The 2019-nCoV and response have been accompanied by a massive 'infodemic' – an over-abundance of information – some accurate and some not – that makes it hard for people to find trustworthy sources and reliable guidance when they need it." Two weeks later, WHO Director-General Tedros Adhanom Ghebreyesus said at the Munich Security Conference that the world is fighting not only an epidemic but also an infodemic, because "fake news spreads faster and more easily than this virus, and is just as dangerous" [2]. Since then, the relatively unknown term "infodemic" became part of the COVID-19 pandemic news coverage, as well as of many scientific studies across disciplines, from medicine to media and journalism studies. The two years of the COVID-19 pandemic have made it possible to study and evaluate the phenomenon of infodemic in the countries that are among the most affected in Europe. One of them is the Czech Republic, which has been reported as one of the top five positions in COVID-19 – related incidence, hospitalisation, and mortality rates [3]. Last but not least, the vaccination rate should be mentioned as an indicator highly sensitive to the infodemic and as a measure of population sensitivity to various types of information disorders (e.g. disinformation and misinformation). And again, the Czech population is worth to be studied as it stands with its reached standardised vaccination rate nearly in the middle of EU countries.

It would be wrong to derive the notion of infodemic from the onset of the COVID-19 pandemic. Its roots are older and date back to the beginning of the new millennium and the advent of the SARS epidemic. The authorship of the concept is attributed to Gunther Eysenbach [4], who became the promoter of the new scientific discipline of infodemiology, and to David Rothkopf [5], who used it as a journalistic metaphor for the phenomenon permeating the world of networked digital media. There is no doubt that its deeper conceptualisation in many disciplines can contribute to solving interdisciplinary problems. With the cooperation of individual professional fields (and with the preservation of deep scientific analysis and proposed solutions), it is possible to face such complex phenomena, which is contained in the metaphor of infodemic.

An effective combination of good journalistic practice, medical expertise and modern information and communication technologies makes it possible to identify selected forms of information distortion in various media. These include, for example, inadequate or incorrect work of journalists with data, wrong

choice of reference examples and comparisons, or the need for more knowledge of medical terminology. The course of individual waves of the COVID-19 epidemic in the Czech Republic offers a unique input suitable for further analytical treatment. The methods and techniques of the social sciences, humanities and arts presented here allow us to understand the leading causes of an infodemic. The result is a knowledge base for innovations in journalism education and the redefinition of journalistic and media ethics in the Czech Republic about the medical field, which is one of the tools to mitigate or minimise the impact of current and future infodemics.

AIMS

— To identify the essential characteristics influencing a digital infodemic in the Czech Republic about detailed knowledge of media communication and the performance of key stakeholders on national and regional levels.

— To find approaches to systematically eliminating false or misleading information during a pandemic? If so, how?

METHODS

A systematic approach in the form of a pilot toolbox facing health misinformation in the Czech Republic during the COVID-19 epidemic is based on a proven methodological background. The information "cake" model (Figure 1) provides the very first broad roadmap on how to fight an infodemic [6], which supplements the World Health Organization (WHO) framework [1]. This model introduces four pillars of infodemic management: (i) information monitoring (infoveillance); (ii) building eHealth literacy and science literacy capacity; (iii) encouraging knowledge refinement and quality improvement processes such as fact-checking and peer-review; and (iv) accurate and timely knowledge translation, minimising distorting factors such as political or commercial influences.

Especially fact checking, peer review and the circulation and exchange of information between four levels (social media, news media, policy and health care practice, and science), including a correct interpretation, are crucial for significant improvement of information delivery to the professionals and the general public.

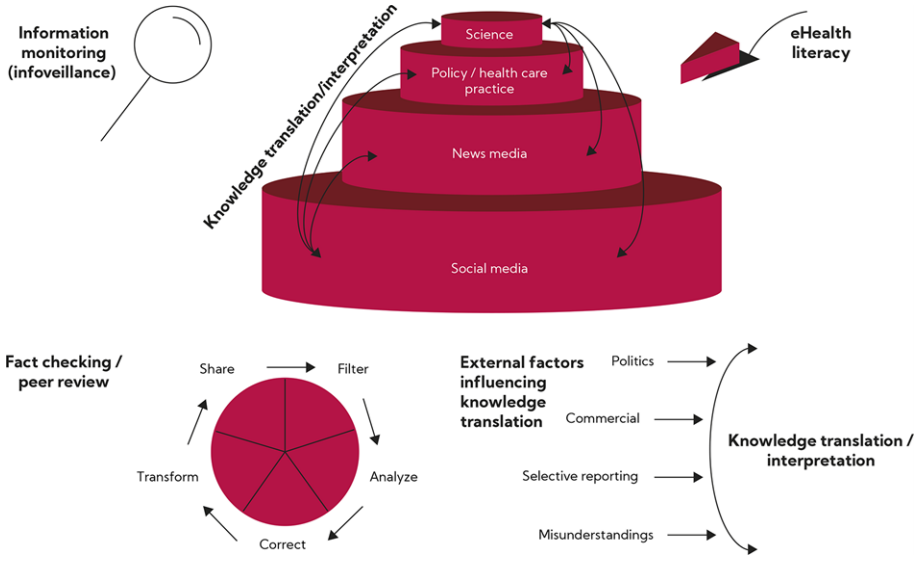


Figure 1: The information "cake" model describing the basics of infodemic management according to Eysenbach

To design and implement a pilot toolbox against health misinformation in the Czech Republic in the COVID-19 age, we combined the basic idea of infodemic management in the form of the information "cake" model. Our interdisciplinary team focused on a normative framework for news media and journalism, with analytical data processing and analysing media coverage of selected topics in medical terminology. Moreover, the National Health Information Portal improving health literacy, supported by health open data driven by state authorities, is also emphasised as a needed component.

RESULTS

BUSINESS AND DATA UNDERSTANDING

With a thorough understanding and knowledge of the government, media, journalistic and scientific environment related to COVID-19 communication in the Czech Republic, we proposed an information matrix (Table 1) that contains three crucial groups (expert associations and entities, official government tools, and media) about the particular pillar of the information "cake" model. The primary objective of this matrix is to identify how the comprehensive model of infodemic management is covered in the Czech Republic and where are its main issues and

gaps. At first glance, it is noticeable that some domains are only partially covered (as a pilot project activity) or not covered at all. Within the case study below, the activities and results related to each pillar are localised to the Czech environment and described in detail. It is important to note that an institutionalised platform under government supervision is needed to support the systematic fight against misinformation and misinterpretation.

The COVID-19 pandemic has been unprecedented in terms of the requirement to transfer scientific knowledge as quickly as possible to policymakers, stakeholders, the media, and the general public worldwide. In the case of the Czech Republic, it can be stated that all the groups involved needed to prepare for this situation. This was particularly evident in the second and subsequent waves of the epidemic (i.e. from autumn 2020 onwards) when the latest scientific knowledge and information reached the target groups with a high degree of inaccuracy and "noise" without proper context and with inaccurate interpretation. The individual pillars in the Czech environment are described below.

Table 1: The matrix combines four pillars of infodemic management and involved stakeholders and tools driving the publishing of information about the COVID-19 epidemic in the Czech Republic

Pillar	Experts, researchers	Government, Ministry of Health	Media
P1: Facilitate Accurate Knowledge Translation	Snow Initiative A multidisciplinary group of experts (civic activity) https://www.iniciativa-snih.cz/ Interdisciplinary Group for Epidemic Situations A multidisciplinary group of experts (ministerial advisory board) https://www.meses.cz/ National Institute for Pandemic Management A multidisciplinary group of experts (ministerial advisory board)	Actual Information about COVID-19 + COVID Portal Official website of the Ministry of Health and the Government – actual situation, restrictions, professional guidelines, recommendations for life situations https://koronavirus.mzcr.cz, https://covid.gov.cz Disease at the Moment Official website of the Ministry of Health and the Government – epidemiology https://onemocneni-aktualne.mzcr.cz/covid-19 Czechia Vaccinates Official website of the Ministry of Health and the Government – vaccination https://www.ceskoockuje.cz Traffic Light System + Anti-epidemic System Guidelines for the implementation and lifting of anti-epidemic measures Analytical reporting services Reports and analyses for epidemic management, media, and public	Public broadcasting Czech Television, Czech Radio, Objective news, educational programs, interactive data analyses "Mobile Radio" radio A platform for communication between local authorities and citizens using official data

Pillar	Experts, researchers	Government, Ministry of Health	Media
P2: Knowledge Refinement, Filtering, and Fact-Checking	Epidemiologists, researchers, and experts in social media	Open data Official datasets published in open or semi-open mode (incidence, hospitalisations, deaths, vaccination) https://onemocneni-aktualne.mzcr.cz/api/v2/covid-19 Smart Quarantine A set of tools and applications for data collection and visualisation at all levels of the epidemic management	Demagog.cz, Manipulatori.CZ, Cesti-elfove.cz Independent civic fact-checking platforms https://demagog.cz, https://manipulatori.cz, https://cesti-elfove.cz "Ověřovna!" ("Verification room!") A fact-checking platform of the Czech Radio
P3: Build eHealth Literacy	National Health Information Portal Source of validated and credible information on health https://www.nzip.cz		----------
P4: Monitoring, Infodemiology, Infoveillance, and Social Listening	Infomore.cz interdisciplinary project for coronavirus-related media analyses https://www.infomore.cz	Semantic Vision analyses Detection of disinformation and adversarial propaganda	Infomore.cz interdisciplinary project for coronavirus-related media analyses https://www.infomore.cz

FIRST PILLAR: FACILITATE ACCURATE KNOWLEDGE TRANSLATION

Experts and researchers

Dozens of experts and researchers in epidemiology, immunology, clinical medicine, and many other disciplines have commented on coronavirus during the epidemic in the Czech Republic. Discussions from scientific conferences, including several conflicting views and claims, thus spilt over into the public domain, which of course, did not positively affect how the public perceived the latest scientific findings.

Government, Ministry of Health

The website koronavirus.mzcr.cz became an official communication platform of the Ministry of Health, which provided official and up-to-date information on

current measures, testing, vaccination, information for health professionals etc. It was then followed in a broader and more parameterised form by the COVID Portal[1], which aimed to describe specific life situations during the epidemic and how to deal with them in more detail. Current daily epidemiological data and datasets have been presented on the Disease at the Moment platform [7]. Throughout the epidemic, there has been an effort to link the measures and restrictions taken to the actual trends of the epidemic situation and to communicate clearly under what circumstances they would be lifted or tightened (e. g. in terms of restrictions on the movement of people, school closures, wearing of masks, mandatory testing, holding of group events, etc.). It should be noted, however, that neither of them was of long duration, and epidemic management on the governmental level has instead been guided by ad hoc adopted sets of measures.

Media

During the COVID-19 epidemic, the transfer of the most accurate knowledge from scientific discourse to the field of journalism was ensured by specialised scientific editors of public service media from Czech Television and Czech Radio. These public service media provided context and educated the public with information on significant news programs and specialised programs (e.g., "Earth in Need" on Czech Television or "Science Plus" on Czech Radio). The public appreciated reputable continuous news and public service media programs during the pandemic. After the first half of the COVID-19 epidemic, people identified the public service media as the second most trusted source of information about this severe health crisis after health experts. After half a year of the COVID-19 epidemic in the Czech Republic, 76% of the population trusted health experts as sources of information, 69% trusted the public service media, 52% trusted the Minister of Health, 45% trusted the online media, and 36% trusted the Prime Minister [8]. Moreover, thanks to the initiative of "Mobile Radio" in cooperation with the technology start-up MAMA AI and the Institute of Health Information and Statistics of the Czech Republic, a tool for citizens of individual municipalities with precise statistics on the ongoing epidemic in the Czech Republic was designed and deployed. Data in this reporting system are validated and, where needed, accompanied by explanatory notes to ensure a correct interpretation.

SECOND PILLAR: KNOWLEDGE REFINEMENT, FILTERING, AND FACT-CHECKING

Experts and researchers

Epidemiologists and other experts became the new stars during the COVID-19 pandemic. They received much coverage in the news media, and many used

1 https://covid.gov.cz/

the modern phenomenon of social networks. However, this proved to be a double-edged weapon. On the one hand, they accelerated the transfer of verified and valid knowledge, and many experts helped to debunk the proliferating misinformation and myths on social media. On the other hand, it also led to sharing of preliminary and unverified information and findings that were later proven false or exaggerated.

Government, Ministry of Health

The so-called Smart Quarantine tools are software solutions used as a crisis management system during the COVID-19 epidemic in the Czech Republic. Specifically, these include a central registry for infectious diseases; an application for collecting data and information from laboratories, sampling points and health stations; an online Dashboard for up-to-date visualisation of the development of the epidemic; a situational map; a mobile application for monitoring persons tested positive for COVID-19; and linking isolated tools to get a comprehensive picture of the current situation in the Czech Republic. These centrally coordinated platforms provide large volumes of data. However, not all of them are intended to be shared with the general public, as their primary purpose is to support crisis management at national and regional levels. The publication of only valid information from these systems under the Ministry of Health's umbrella towards the public concerning the COVID-19 epidemic in the Czech Republic has proved crucial from the beginning. This information in open data has been published continuously according to the evolution of the epidemic and various requests of interested stakeholders in the National Catalogue of Open Data. From 1 March 2020 to 1 April 2022, a total of 57 open datasets related to COVID-19 have been published and widely used by the general public, scientists, public authorities and decision-makers [9]. The global aim is to provide complete factual information, including correct interpretation, for further communication fully guaranteed by the national authority.

Media

In journalism, an essential role in verifying facts is played not only by traditional news media, whose routine procedures ensure that published information has been confirmed from at least two relevant sources, but also by a relatively new area of journalism called fact-checking journalism. According to Luengo and García-Marín [10], fact-checking journalism directly responds to the growing spread of disinformation and misinformation in networked digital media. The traditional news media (e.g., news agencies such as AFP and Reuters or public service media such as BBC and Deutsche Welle) systematically focus on refuting disinformation and verifying the factual correctness of selected informational errors in public space. Fact-checking journalism platforms take

various forms – from specialised websites (e.g. AFP, BBC) to regular radio or television broadcasting sections. Before the COVID-19 epidemic, three media based on civic engagement (civic journalism) focused on developing fact-checking journalism in the Czech Republic, namely Demagog.cz, Manipulatori.cz and Cesti-elfove.cz. Their impact and influence on the audience are negligible compared to traditional news media, including public service media. During the COVID-19 epidemic, none of the public service media in the Czech Republic, not even Czech Television, the most trusted media brand in the Czech Republic, established a fact-checking journalism platform that would systematically verify and correct disinformation disseminated in digital media. In September 2021, Czech Radio set up a section "Ověřovna!" ("Verification room!") within their online portal irozhlas.cz. However, from September 2021 to December 2021, only five fact-checks related to the COVID-19 epidemic were published.

THIRD PILLAR: BUILD EHEALTH LITERACY

The Czech population is below average among European countries in terms of the overall level of health literacy and the proportion of people with low health literacy [11,12]. Health literacy development and continuous improvement concerns all three of these bodies (experts, government, media). For this reason, this chapter is conceived more generally. A systematic approach to educating the general population and providing validated and credible health information has yet to be established nationally. The National Health Information Portal (NHIP) has been developed since 2019 under the umbrella of the national authorities and professional medical societies. The COVID-19 epidemic delayed the launch of the NHIP; the portal was officially launched in July 2020. However, its operation is not a reaction to the COVID-19 epidemic/infodemic but rather an effort to provide a more comprehensive approach to health education for the Czech population. Somewhat surprisingly, this intention was also reflected by users. The coronavirus-related terms ranked third (behind "homecare" and "spa") from July 2020 to January 2022. The platform is an understandable, clear and user-friendly online source for a wide range of information on health, diseases and other medical conditions, proper health and disease care and services at the health-social interface. The published content is always carefully reviewed and validated by experts, stakeholders, and lay readers.

FOURTH PILLAR: MONITORING, INFODEMIOLOGY, INFOVEILLANCE AND SOCIAL LISTENING

The first Czech platform that tried to fulfil Eysenbach's process of continuous monitoring of the media landscape and the associated infoveillance during the COVID-19 epidemic was the portal Infomore.cz. It was an interdisciplinary project of experts in journalism and media studies from Charles University,

health statisticians and computer scientists from Masaryk University, and media analysts from the NEWTON Media agency, which has the largest archive of media content in the Czech Republic. Since December 2020, the Informore.cz website has regularly published various quantitative and qualitative analyses. The quantitative analyses covered the most frequent words of media coverage in the form of monthly word clouds, individual elements of media panic based on the concept of the linguist Roger Fowler (e.g., inappropriate use of war metaphors, frequent occurrence of quantification rhetoric, or inappropriate use of medical terms), and the occurrence of individual disinformation narratives in social and traditional media. The qualitative analyses concerned the basic parameters of the functioning of disinformation resources on social networks or alternative framing of vaccination against COVID-19. Elements of machine learning were used for the analyses. Without them, infoveillance would not be possible.

DATA PREPARATION

During the two years of the COVID-19 epidemic (from 1 December 2019 to 31 January 2022), an extensive corpus of 2,485,724 media articles in the Czech language dedicated to this health crisis was created from the data of the Newton Media company (co-investigator of the Infomore.cz project[2]). The articles were collected from more than 4,000 media sources (traditional and online media). Based on this corpus, it is possible to reconstruct the media coverage of individual stages of the epidemic in the Czech Republic.

Data on the number of disinformation articles related to the COVID-19 epidemic was obtained from Semantic Vision's corpus. The company operates its own Open Source Intelligence (OSINT) system, which builds on elements of artificial intelligence, especially advanced semantic analysis and big data semantics. Semantic Visions collects and analyses 90% of the world's online news content. The corpus of disinformation narratives of the COVID-19 epidemic, on which our analyses are based, is the result of monitoring 4,313 websites in the Czech language. An article is included in the corpus if it is more than 75% based on manipulation and false claims.

The official source of information on COVID-19 epidemiology in the Czech Republic is the Information System of Infectious Diseases, operated by the Institute of Health Information and Statistics. Data on individual cases are entered by laboratories and Regional Public Health Authorities. Outputs from the system and open datasets are available on Disease at the Moment[3], the official website of the Ministry of Health for publishing data on the COVID-19 epidemic.

2 https://www.infomore.cz/

3 https://onemocneni-aktualne.mzcr.cz/covid-19

MODELLING

Through different types of media analysis, it is possible to point out good and bad media practices. The outputs in the form of word clouds and qualitative and quantitative content analyses aim to hold a mirror up to not only journalistic practice but also all who express themselves in the media space. Below, selected examples are briefly described.

ARTICLES IN THE EPIDEMIC'S FIRST PHASE

The number of articles devoted to the epidemic peaked in the epidemic's first phase (see Figure 2). Semantic Visions is a significant player in infoveillance in the Czech Republic. It is a software-based actionable analytics company based in Prague and London. It operates a military-grade Open-Source Intelligence (OSINT) system that collects and analyses 90% of the world's news content. Semantic Visions focuses on the detection of disinformation and negative propaganda. The company examines the occurrence of individual disinformation narratives on 4,313 websites in the Czech language. Semantic Vision regularly provided the results of its findings to the Ministry of Health of the Czech Republic. The ministry's work with these data was not systematic.

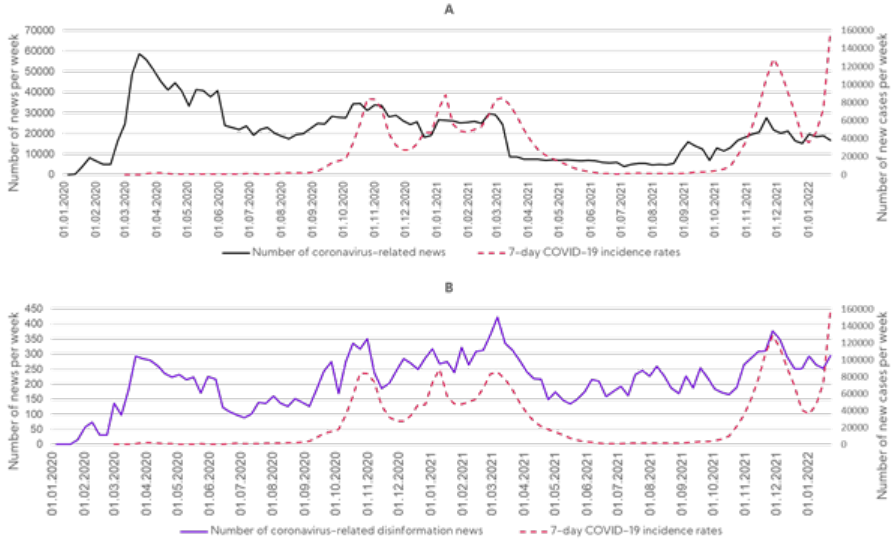


Figure 2: COVID-19 weekly incidence rates and weekly numbers of coronavirus-related news and disinformation news in Czech media. Data source: Newton Media, Semantic Visions, Institute of Health Information and Statistics of the Czech Republic

The highest media coverage occurred at the beginning of the COVID-19 epidemic, in March 2020; at times of the highest incidence and death rates, the number of contributions was less than half of the original coverage. On the other hand, the number of misinformation posts followed the course of the epidemic much more closely. The most mentioned conspiracy theories about the causes and origins of COVID-19 were the installation of 5G networks and Bill Gates. Other approaches received much less publicity – mainly about origins in Chinese or American laboratories or uncontrolled spread through migration [13].

WORD CLOUDS ABOUT COVID-19

Newton Media's media monitoring corpus on COVID-19 contained 1,153,999 messages as of 31 October 2020. By querying the identification of media sources, it can be determined that the news came from 3,392 different media sources. In addition to analysing all data, 358 references were selected from the total, and 7 clusters were created above them with specific media type characteristics:

— national and regional daily newspapers, including their websites (excluding tabloids),

— primary tabloid print media and leading tabloid websites,

— commercial television and their websites,

— the leading economic media and websites,

— commercial radios and their websites,

— news magazines and their websites,

— public service media and their websites.

All forms of the word coronavirus, which naturally dominated the clouds due to the topic of the news, were removed from the word clouds, taking space away from words related to the news, which were of particular interest to us.

Figure 3: Word cloud of the words used in all monitored media coverage of COVID-19 between December 1, 2019, and October 31, 2020. Data source: the research team of the Infomore.cz project (TL04000176), available only in Czech

As seen in Figure 3, news coverage of COVID-19 disease in the overall news sample analysed was dominated by the words measures (opatření), infected (nakažených), cases (případů), healthcare (zdravotnictví), number (počet), government (vláda), infections (nákaza), and thousand (tisíc), between January and October 2020. The comments varied over time according to the evolution of the pandemic and the type of media. Since the most relevant in terms of the daily life of the population was the media coverage of different kinds of measures (which were brought by the government, especially by the ministers of health, while health and hospital capacity were another frequently mentioned topic), they were constantly being prepared and dynamically changing, so that they were the focus of attention for a long time, as were the numbers of infected. Especially in spring, when they were a symbol of solidarity, the word masks (roušky) occupied a prominent place. Discussions of the impact on the economy are illustrated by the numerals and the word crowns (korun). The complete analytical report is available at www.infomore.cz.

EVALUATION AND DEPLOYMENT

The individual analytical outputs, which can significantly help in the correct understanding of the presentation of facts, including the necessary interpretation, were always thoroughly validated in terms of content and visuals by members of the research team. Internal reviewers have involved health experts, computer scientists, and communication and media experts. The primary objective was the clarity and comprehensibility of the outputs subsequently published online for the general public without access restrictions. The results in the form of media analyses divided into word clouds, qualitative and quantitative content analyses, static educational articles, open datasets, and a unique dictionary of terms related to the COVID-19 epidemic are intended to support overall health literacy across the Czech population. Following the theoretical principles mentioned above, these results have been published on three portals interlinked to cover selected domains that present only objective and valid information.

DISCUSSION

Two years of the COVID-19 epidemic in the Czech Republic – one of the most affected countries in Europe – have shown that the metaphor of infodemic has not become an essential topic in the public sphere. It is even though an infodemic can be a symbol of a comprehensive approach to spreading excessive information, including disinformation and misinformation, about a severe health crisis, which may make it harder to find a solution to the crisis. In the corpus of media coverage of the COVID-19 epidemic in the Czech Republic, which amounts to a total of 2,485,724 articles published in the Czech language between 1 December 2019 and 31 January 2022 in more than four thousand media titles and brands (traditional and online media), the term "infodemic" appeared only in 487 of them. As a result, the Czech Republic lacks an institutionalised platform to support the fight against disinformation and erroneous interpretations. Systematic fact-checking is developed only by non-profit organisations with limited impact (Demagog.cz and Manipulatori.cz). The development of fact-checking journalism remains outside the attention of public service media, including Czech Television as the most trusted media brand in the Czech Republic. At the same time, the infodemic issue concerns not only health crises but crises in general (for instance, political or war-related), as demonstrated by the Russian occupation of Ukraine at the beginning of 2022. The Czech Elves, a civic initiative monitoring the Czech disinformation scene, pointed out the following: "During February, disinformation about COVID-19, which had completely dominated in

recent months, was replaced by disinformation supporting Russia's claims to Ukraine and its subsequent brutal military attack" [14].

EVALUATION OF THE AIMS OF THE CHAPTER

- To identify the essential characteristics influencing a digital infodemic in the Czech Republic about detailed knowledge of media communication and the performance of key stakeholders on national and regional levels.
  - These characteristics are based on the information "cake" model [6], which illustrates the very first broad roadmap to fight an infodemic. A newly designed information matrix of COVID-19 infodemic management in the Czech Republic extended this approach and properly combines four fundamental pillars (facilitate accurate knowledge translation; knowledge refinement, filtering, and fact-checking; build eHealth literacy; monitoring, infodemiology, infoveillance, and social listening), involved stakeholders and tools (experts and researchers; government and Ministry of Health; media) driving publishing information about the COVID-19 epidemic.

- To find approaches to systematically eliminating false or misleading information during a pandemic? If so, how?
  - The selected projects, under the auspices of government organisations collaborating with health experts, computer scientists, and communication and media experts in the Czech Republic, provide or produce the necessary online tools and communication platforms with fully guaranteed and proven information. In this way, they significantly support broader education and health literacy improvement of the general public and professionals. Three examples of good practice are the Infomore.cz[4] project, the National Health Information Portal[5], and the National Catalogue of Open Data[6], which contains various healthcare datasets. Separately, these modern platforms have no chance of influencing the opinions and attitudes of the general public. However, with systematic and institutionally covered and managed support from governmental organisations, they can form, together with other elements, a solid background for the fight against the infodemic in the Czech Republic. The combination of proven attitudes of professional societies under an umbrella of the Ministry of Health and the Czech Medical Association of

4 https://www.infomore.cz/
5 https://www.nzip.cz/
6 https://data.mzcr.cz/

J. E. Purkyně (associating experts from various medical disciplines) and the correct handling of data, including accurate and non-misleading interpretation, is the key to improve the currently not entirely satisfactory situation in the field of infodemic management, not only in connection with the COVID-19 epidemic.

LESSONS LEARNED

Valid and correctly interpreted data proved to be crucial for decision-making and communication during the COVID-19 epidemic. The information matrix and the described pillars fall under the domain of domain and data understanding, which is one of the main outputs of the Informore.cz project, documents the collection of experience, communication channels and the ability to disseminate information among the general public. Analytical perspectives combining media space and open data on the course of the COVID-19 epidemic have provided unique outputs that highlight the phenomenon of an infodemic.

A systematic approach to combating disinformation requires not only existing and validly processed data but also nationwide education of the general and informed public with the support of interested public authorities and the media space.

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