

IS COVID-19 AN “ORDINARY FLU” THAT BENEFITS POLITICIANS? PERCEPTION OF PANDEMIC DISINFORMATION IN LATVIA

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ABSTRACT:

This study examines society's susceptibility to COVID-19-related disinformation in Latvia, linking it to self-evaluation of the perceived COVID-19 health risks. The main research questions are: “How do Latvians experience disinformation about COVID-19?”; “How does this experience relate to different degrees of perceived disease risks?”. A nationally representative survey was conducted in September 2020, reaching 1,013 of Latvia's residents aged 18 to 75. More than half of the respondents (54%) have encountered misleading or false information; 30% thought that “the COVID-19-related chaos is beneficial to politicians”, while 17% believed that “COVID-19 is like flu”. Respondents with a higher level of education and more active media usage habits are more likely to recognise disinformation about COVID-19. Moreover, this skill is linked to a higher degree of perceived threat of the disease. Yet, those who rate their risk of disease as very high, alongside those who rate their risk of disease as low and unreal, are ‘infodemically’ vulnerable – more susceptible to disinformation, false news, and conspiracy theories. Recommendations to communicators about curbing the diffusion of disinformation and diminishing its impact are provided.

KEY WORDS:

conspiracy theories, COVID-19, disinformation, infodemic, Latvia, perceived disease risk

1 Introduction

The World Health Organisation (WHO) introduced the newly discovered disease's official name, COVID-19, on 11th February 2020, and announced the pandemic on 11th March 2020.¹ That also marked the beginning of the “infodemic”, or a global epidemic of mis- and disinformation.² “Disinformation” is

1 WHO: *WHO Director-General's Remarks at the Media Briefing on 2019-nCoV on 11th February 2020*. Released on 11th February 2020. [online]. [2021-02-11]. Available at: <<https://www.who.int/director-general/speeches/detail/who-director-general-s-remarks-at-the-media-briefing-on-2019-ncov-on-11-february-2020>>.

2 ZAROCOSTAS, J.: How to Fight an Infodemic. In *The Lancet*, 2020, Vol. 395, No. 10225, p. 676.



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false information that is distributed purposefully to mislead or deceive the audience. All false information is misinformation, while only purposefully disseminated misinformation is disinformation.

Already at an early stage of the pandemic, in March 2020, the public service media in Latvia warned about the spread of COVID-19 disinformation.³ Public service media and independent fact-checking initiatives regularly investigated various unverified statements,⁴ despite verbal abuse and threats from COVID-19-denying groups.⁵ Government officials such as the President of the Republic of Latvia and the State Chancellery have put disinformation on their agendas like the article Disinformation and Stereotypes about COVID-19 and Vaccination Must Be Dispelled, published on *President.lv* on 4th January 2021. Nevertheless, inconsistent and unpredictable government decisions, severe restrictions and radical changes in employment, childcare and leisure, worrying news about infection rates and deaths, constant threat of contagion, and systemic problems within the healthcare structure all created a fertile ground for the rise and spread of disinformation in Latvia.

Financial benefits and political goals are among the motives to produce and circulate disinformation.⁶ According to the social diffusion model, people also disseminate disinformation because they believe it to be true or because they do not want to contradict the opinions of their social circle.⁷ Disinformation tends to spread faster and wider than verified facts.⁸ Once established, belief in disinformation is not easy to challenge. The concept of “belief persistence” is one way to understand why people do not easily change their opinion.⁹ Corrections can even cause the opposite effect and enforce the belief in disinformation in a process conceptualised as the backfire effect.¹⁰ Disinformation is most successful when it generates a strong affective response, while the correction does not.¹¹

Health information in general is found to be especially prone to uncertainty and misinterpretations.¹² The COVID-19 pandemic has increased searches for health information on the Internet. Social networking sites (SNS), especially *Facebook*, have been the most proliferating platforms for false and misleading information in Latvia.¹³ Some Latvian media that are under the influence of Russian official news outlets have also disseminated disinformation.¹⁴ Even some politicians and healthcare professionals have propagated misleading information.¹⁵

During the COVID-19 pandemic, disinformation is shown to have a direct detrimental impact on public health and the economy as well as fostering social inequality.¹⁶ False and misleading claims, even if a relatively small number of the population believes them, have the potential to undermine the efforts to contain the spread of the virus.¹⁷ Furthermore, unencumbered circulation of COVID-19 disinformation has the potential to diminish public trust in science and damage the credibility of scientists and their expertise in the long term.¹⁸

Disinformation, which jeopardised public health since the outbreak of COVID-19, belongs to the broader category of anti-science populism or anti-science scepticism,¹⁹ also known as “pandemic populism”.²⁰ It is based on belief that healthcare professionals and scientists should not be trusted because they have conspired with governments or other powerful entities and are acting against people’s best interests to gain some personal benefits. Anti-science scepticism contributes to the spread of infodemic and poses a threat to public health, because it promotes disobedience to the restrictions and distrust in government decisions.²¹ Deuze concludes that “most of the debates and discussions about the pandemic do not just concern the virus and its impact but focus especially on the roles of expert information provision, news coverage, government communications, and social media. The coronavirus pandemic is a mediatized event as much as it is a virus that infects millions of people around the world”.²²

In agreement with these observations, we conceptualise COVID-19 disinformation in this study as a significant factor that can influence the perception of disease risk and subsequently hinder desirable health behaviour changes during the pandemic such as adherence to restrictions, social distancing, wearing masks where required, and proper hand hygiene. In order to examine the impact of disinformation on people’s opinions about health behaviours during the COVID-pandemic (September 2020), we analyse the “perception of disinformation” in correlation with the “perceived disease risk”. “Perception of disinformation” is the respondents’ ability to recognise disinformation, to assess its sources, and to react when encountering it. In our examination of the audience’s behaviour and relationships to media content, we follow the audience reception studies tradition.²³ It also allows the discussion of the audience’s passivity or activity in the media consumption process.²⁴ “Perceived disease risk” is the perception of likelihood and severity of disease.²⁵ Several groups of factors influence the risk, such as individual factors (genetics, age, experience, physical state, cognitive and affective resilience) and external factors (politics, media, other peoples’ opinions) and culture.²⁶ Perceived

3 BOJĀRS, G.: *Tiesā runa: Kā dzīvot bīstamā koronavīrusa ēnā?* Released on 4th March 2020. [online]. [2021-03-04]. Available at: <<https://lsm.lv/raksts/04.03.2020-tiesā-runa-ka-dzivot-bistama-koronavirusa-ena>.id181698/>.

4 PAVLOVS, S.: *Vai ārsts Pēteris apinis stāsta patiesību par Covid-19?* Released on 16th December 2020. [online]. [2021-10-19]. Available at: <<https://www.lsm.lv/raksts/zinas/zinu-analize/vai-arsts-peteris-apisin-stasta-patiesibu-par-covid-19>.a385607/>.

5 LETA: *Policija sakusi pārbaudīt par naidīgiem komentāriem pret ģimenes ārsti. Skruži-Janavu.* Released on 9th December 2020. [online]. [2021-12-09]. Available at: <<https://www.delfi.lv/news/national/criminal/policija-sakusi-parbaudi-par-naidigiem-komentariem-pretgimenes-arsti-skruzi-janavu.d?id=52742613>>.

6 HUMPRECHT, E., ESSER, F., VAN AELST, P.: Resilience to Online Disinformation: A Framework for Cross-National Comparative Research. In *The International Journal of Press/Politics*, 2020, Vol. 25, No. 3, p. 497.

7 See: TANDOC, E. C., LIM, D., LING, R.: Diffusion of Disinformation: How Social Media Users Respond to Fake News and Why. In *Journalism*, 2020, Vol. 21, No. 3, p. 381-398; KARLOVA, N. A., FISHER, K. E.: A Social Diffusion Model of Misinformation and Disinformation for Understanding Human Information Behavior. In *Information Research*, 2013, Vol. 18, No. 1, p. 1-12.

8 PAPANASTASIOU, Y.: Fake News Propagation and Detection: A Sequential Model. In *Management Science*, 2020, Vol. 66, No. 5, p. 260.

9 THORSON, E.: Belief Echoes: The Persistent Effects of Corrected Misinformation. In *Political Communication*, 2016, Vol. 33, No. 3, p. 462.

10 ECKER, U. K. H., LEWANDOWSKY, S., CHADWICK, M.: Can Corrections Spread Misinformation to New Audiences? Testing for the Elusive Familiarity Backfire Effect. In *Cognitive Research: Principles and Implications*, 2020, Vol. 5, No. 1, p. 41.

11 THORSON, E.: Belief Echoes: The Persistent Effects of Corrected Misinformation. In *Political Communication*, 2016, Vol. 33, No. 3, p. 465.

12 HA, L., PEREZ, L. A., RAY, R.: Mapping Recent Development in Scholarship on Fake News and Misinformation, 2008 to 2017: Disciplinary Contribution, Topics, and Impact. In *American Behavioral Scientist*, 2019, Vol. 65, No. 2, p. 4.

13 BĒRZIŅA, S., PURIŅA, E., PETROVA, A.: *RE:Check pēta Facebook mītus par COVID-19.* Released on 19th October 2020. [online]. [2020-10-19]. Available at: <<https://www.lsm.lv/raksts/zinas/latvija/recheck-peta-facebook-izplatitos-mitus-par-covid-19>.a378385/>.

14 PETROVA, A.: *RE:Check pēta: Ventas Balss, Radio Baltkom un astonzobu mizgrauzis.* Broadcast on 16th September 2020. [online]. [2020-10-19]. Available at: <<https://lr1.lsm.lv/raksts/labrit/recheck-peta-ventas-balss-radio-baltkom-un-astonzobu-mizgrauzis>.a134274/>.

15 BĒRZIŅA, S., PURIŅA, E.: *Ko Ārstu biedrības valdes locekļi Apinis tev nestāsta par COVID-19?* Broadcast on 6th October 2020. [online]. [2020-10-06]. Available at: <<https://rebalta.lv/2020/10/ko-arstu-biedribas-valdes-loceklis-apisin-tev-nestasta-par-covid-19/>>.

16 Compare to: HUMPRECHT, E., ESSER, F., VAN AELST, P.: Resilience to Online Disinformation: A Framework for Cross-National Comparative Research. In *The International Journal of Press/Politics*, 2020, Vol. 25, No. 3, p. 493-516; NIELSEN, R. K. et al.: *Communications in the Coronavirus Crisis: Lessons for the Second Wave.* Released on 27th October 2020. [online]. [2020-10-19]. Available at: <<https://reutersinstitute.politics.ox.ac.uk/communications-coronavirus-crisis-lessons-second-wave>>.

17 HARTLEY, K., KHUONG, V. M.: Fighting Fake News in the COVID-19 Era: Policy Insights from an Equilibrium Model. In *Policy Sciences*, 2020, Vol. 53, No. 3, p. 8. [online]. [2020-09-09]. Available at: <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7479406/>>.

18 See: EICHENGREEN, B., AKSOY, C. G., SAKA, O.: Revenge of the Experts: Will COVID-19 Renew or Diminish Public Trust in Science? In *Journal of Public Economics*, 2021, Vol. 193, p. 1-30.

19 See: HARTLEY, K., KHUONG, V. M.: Fighting Fake News in the COVID-19 Era: Policy Insights from an Equilibrium Model. In *Policy Sciences*, 2020, Vol. 53, No. 3, p. 8. [online]. [2020-09-09]. Available at: <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7479406/>>.

20 See: BOBERG, S. et al.: Populism: Facebook Pages of Alternative News Media and the Corona Crisis – A Computational Content Analysis. In *Muenster Online Research Working Paper*, 2020, No. 1, p. 1-21. [online]. [2020-04-09]. Available at: <<https://arxiv.org/pdf/2004.02566.pdf>>.

21 See, for example: MARINTHE, G. et al.: Looking Out for Myself: Exploring the Relationship between Conspiracy Mentality, Perceived Personal Risk, and COVID 19 Prevention Measures. In *Health Psychology*, 2020, Vol. 25, No. 4, p. 957-980.

22 DEUZE, M.: The Role of Media and Mass Communication Theory in the Global Pandemic. In *Communication Today*, 2020, Vol. 11, No. 2, p. 14.

23 See: TSFATI, Y.: Media Scepticism and Climate of Opinion Perception. In *International Journal of Public Opinion Research*, 2003, Vol. 15, No. 1, p. 65-82.

24 See: ALMENAR, E. et al.: Gender Differences in Tackling Fake News: Different Degrees of Concern, but Same Problems. In *Media and Communication*, 2021, Vol. 9, No. 1, p. 229-238.

25 See: SPERLING, D.: Ethical Dilemmas, Perceived Risk, and Motivation among Nurses during the COVID-19 Pandemic. In *Nursing Ethics*, 2021, Vol. 28, No. 1, p. 9-22.

26 See: SIAKI, L. A., LOESCHER, L. J.: Pacific Islanders’ Perceived Risk of Cardiovascular Disease and Diabetes. In *Journal of Transcultural Nursing*, 2011, Vol. 22, No. 2, p. 191-200.

disease risk is an integral part of health communication models²⁷ and health behaviour change theories.²⁸ Using part of the Health Belief Model²⁹ that characterises perceived susceptibility and perceived severity of disease, we correlate disinformation perception data with the perceived disease risk data. This model employs the framework of health psychology and identifies health behaviour's determining factors.³⁰

In turn, "health behaviour" describes all actions that influence a person's physical, mental, or emotional health. These can be actions that protect or improve health as well as habits and activities that damage it. It is necessary to recognise risks to one's well-being and health in order to change one's behaviour and maintain these changes.³¹ Any health information creates an assessment of perceived risk and its possible overcoming.³² Qualitative information helps individuals to better understand their risks³³ while mis- and disinformation causes uncertainty.³⁴ Research has shown that a higher level of perceived risk leads to a higher degree of adherence to restrictions and engagement in preventive health behaviours.³⁵ Subjective confidence or assessment on a person's vulnerability³⁶ to health threats emphasises the relation between perceived risk and health behaviour.

2 Methodology

We hypothesise that the disinformation perception is influenced by the perceived disease risk. To test the hypothesis, we have defined the following research questions:

- RQ1: How does the population of Latvia perceive COVID-19 disinformation?
- RQ2: How does the perception of COVID-19 disinformation correlate with the perceived disease risk?

At a preliminary stage of research, we carried out a feasibility study to identify the most common COVID-19 disinformation narratives on SNS and comments sections of online news portals. We defined the following main types of COVID-19 disinformation:

- denial of the existence of the disease and its severity (including the disease itself and the pandemic statistics);
- arguments that COVID-19 can be avoided using popular folk remedies (hot baths, healthy diet) and maintaining a healthy lifestyle;
- conspiracy theories (the pandemic was caused by international corporations; politicians benefit from it);
- and fearmongering (restrictions are designed to bring the population under total control, COVID-19 tests are harmful to people's health).

27 See also: BREWER, N. T. et al.: Meta-Analysis of the Relationship between Risk Perception and Health Behaviour: The Example of Vaccination. In *Health Psychology*, 2007, Vol. 26, No. 2, p. 136-145.

28 Compare to: SIAKI, L. A., LOESCHER, L. J.: Pacific Islanders' Perceived Risk of Cardiovascular Disease and Diabetes. In *Journal of Transcultural Nursing*, 2011, Vol. 22, No. 2, p. 191-200.

29 See: BECKER, M. H., RADIUS, S. M., ROSENSTOCK, I. M.: Compliance with a Medical Regimen for Asthma: A Test of the Health Belief Model. In *Public Health Reports*, 1978, Vol. 93, No. 3, p. 268-277.

30 Compare to: SPERLING, D.: Ethical Dilemmas, Perceived Risk, and Motivation among Nurses during the COVID-19 Pandemic. In *Nursing Ethics*, 2021, Vol. 28, No. 1, p. 9-22.

31 See also: SIAKI, L. A., LOESCHER, L. J.: Pacific Islanders' Perceived Risk of Cardiovascular Disease and Diabetes. In *Journal of Transcultural Nursing*, 2011, Vol. 22, No. 2, p. 191-200.

32 SARWAR, F., JAMEEL, H. T., PANATIK, S. A.: *Understanding Public's Adoption of Preventive Behaviour during COVID-19 Pandemic Using Health Belief Model: Role of Appraisals and Psychological Capital*. [online]. [2021-01-12]. Available at: <https://doi.org/10.31124/advance.12661178.v1>.

33 LEE, S. W. S. et al.: Sneezing in Times of Flu Pandemic: Public Sneezing Increases Perception of Unrelated Risks and Shifts Preferences for Federal Spending. In *Psychological Science*, 2010, Vol. 21, No. 3, p. 375-377.

34 See: OROM, H. et al.: Causes and Consequences of Uncertainty about Illness Risk Perceptions. In *Journal of Health Psychology*, 2020, Vol. 25, No. 8, p. 1030-1042.

35 See also: SIECRIST, M., LUCHSINGER, L., BEARTH, A.: *The Impact of Trust and Risk Perception on the Acceptance of Measures to Reduce COVID-19 Cases*. Released on 12th January 2021. [online]. [2021-01-12] Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8014821/>.

36 Compare to: BREWER, N. T. et al.: Risk Perceptions and Their Relation to Risk Behavior. In *Annals of Behavioral Medicine*, 2004, Vol. 27, No. 2, p. 125-130.

Following this, a nationally representative sociological survey was conducted in the respondents' places of residence (18th – 29th September 2020). A stratified random sample was used to select the respondents. The stratification was implemented according to the administrative-territorial principle. The data was weighted according to the records of the Population Register of the Office of Citizenship and Migration Affairs of the Ministry of the Interior of the Republic of Latvia from 27th January 2020.

The sample comprised 1,013 Latvian residents aged 18 – 75. The most widely represented age groups were 25 – 34 and 35 – 44 (almost 20% in each group). 46% of men and 54% of women participated in the survey. The random sample method provided a sample of adequate representations of all ethnic groups of Latvia (Latvians, Russians, Belarussians, Ukrainians, Poles, etc.). The largest ethnic group was Latvians, comprising almost 60% of the respondents. The SPSS programme was used for the initial processing of the data, comparison, and grouping, mainly using the functions of descriptive statistics and correlation.

The data included in this study is based on 8 survey questions. Five of them are multi-choice questions; three are Likert-scale questions. The questionnaire contained questions about encounters with disinformation and respondents' actions upon such encounters on SNS. Respondents were asked to evaluate popular false statements about COVID-19. Some of these statements have been analysed in previous studies, such as those regarding the role of celebrities in disseminating disinformation or the use of folk remedies to avoid the disease.³⁷

Asked to self-evaluate their and their families' risk of COVID-19, 39% of respondents think it is low but realistic, 28% think it is moderate and realistic, 15% claim it is low and almost unrealistic, 5% think it is high and very realistic, 2% state that it is very high and very realistic, but 11% could not answer. According to these responses, we grouped the respondents in four categories: unconcerned (15%), a little concerned (39%), moderately concerned (28%), and rather and very concerned (7%). The results are in Table 1.

Table 1: How high is the risk of contracting COVID-19 for you and your family?

Respondent groups	Self-evaluated disease risk	% of all respondents
Unconcerned	Low and almost unrealistic	15%
A little concerned	Low but realistic	39%
Moderately concerned	Moderate and realistic	28%
Rather and very concerned	High and realistic + very high and very realistic	7%

Source: Own processing

One question was designed to assess the perceived impact of the pandemic on respondents' daily lives. More than half indicated that there were almost no changes (56%) or changes were moderate (37%). Only 4% of respondents said that the state of emergency changed their whole life; 3% could not answer. The only group that claimed the pandemic changed their entire life comprised people aged 18 – 24 (7%). A moderate change was often felt by economically active residents aged 35 – 44, less frequently by seniors aged 64 – 74 who more often than others indicated that the pandemic did not cause any change (74%).

The unconcerned comprise respondents with primary education (25%), unemployed (23%), employees with low income (21%), and people who said the pandemic did not change their life (20%). A little concerned are respondents aged 18 – 24 (49%) and 25 – 34 (46%), students and pupils (48%), employees with high income (49%). Rather and very concerned are respondents aged 64 – 75 (10%), Latvia's non-citizens (former citizens of the USSR without the citizenship of the Republic of Latvia or any other country – 10%), managers (15%), Riga district inhabitants (10%), and people whose lives were significantly changed by the pandemic (12%).

37 See: KAISER, J., RAUCHFLEISCH, A., CORDOVA, C.: Fighting Zika with Honey: An Analysis of YouTube's Video Recommendations on Brazilian YouTube. In *International Journal of Communication*, 2021, Vol. 15, p. 1244-1262.

3 Results: Exposure to COVID-19 Disinformation

More than half (54%) of the respondents have encountered misleading information, yet the proportion of respondents who cannot assess it (one in five) or have not encountered it (one in four) is significant (Table 2).

Table 2: How often have you encountered information about COVID-19 in the media and SNS which, in your opinion, is false and misleading?

		Daily or almost daily	At least once a week	At least once a month	Rarely	Never	Hard to say/ NA
Risk assessment	Total	13%	18%	12%	11%	26%	20%
	Unconcerned (15%)	16%	11%	7%	8%	41%	17%
	A little concerned (39%)	14%	18%	15%	12%	25%	16%
	Moderately concerned (28%)	10%	21%	16%	13%	23%	17%
	Rather and very concerned (7%)	27%	31%	5%	9%	8%	20%
Changes	Significant (4%)	24%	24%	20%	5%	13%	14%
	Moderate (37%)	12%	23%	14%	11%	20%	20%
	Slight (56%)	13%	14%	10%	12%	31%	20%

Source: Own processing

The average mean in the answer distribution is 3.24, which suggests that at least once a month each resident of Latvia encounters disinformation. More frequently than others, daily encounters with disinformation were indicated by people aged 45 – 54 (17%), people with low income (16%), and Riga district residents (19%). Disinformation is encountered at least once a week by men (19%), people with higher education (20%), employees of the private sector (22%), entrepreneurs (25%), and people with mid-level income (21%). Those respondents whose life was altered by the pandemic (25%) and who see their risk of COVID-19 as high and realistic (26%; 36%, respectively) indicated that they encounter disinformation daily or weekly. People aged 64 – 75 (9%), Latvia’s non-citizens (10%), and the retired (8%) acknowledge seeing disinformation less frequently. These groups include a higher number of people who do not use SNS which was the major platform for the dissemination of false information during the pandemic in Latvia.³⁸

38 BĒRZIŅA, S., PURIŅA, E., PETROVA, A.: *RE: Check pēta Facebook mītus par COVID-19*. Released on 18th October 2020. [online]. [2020-10-19]. Available at: <<https://www.lsm.lv/raksts/zinas/latvija/recheck-peta-facebook-izplatitos-mitus-par-covid-19.a378385/>>.

Choosing from a list of various sources, the respondents most often identified the following as distributors of disinformation: journalists (25%), influencers on SNS (14%), celebrities (13%), the Saeima (Latvian Parliament) deputies (11%), and the health minister Ilze Viņķele (11%). Least associated with disinformation were EU leaders and institutions, other representatives of the Ministry of Health, and other ministers. 27% said that none of the groups on the list are distributors of disinformation; one in five respondents could not answer the question. Journalists were most often identified as sources of disinformation by respondents aged 25 – 34 (31%), those with higher education (30%), residents of Riga (36%), people whose lives somewhat changed because of the pandemic (29%), with low but realistic perceived risk (28%).

The group of rather and very concerned more frequently identified these sources as distributors of disinformation: the Minister for Health, members of Parliament, people on SNS, and influencers. Those whose lives changed significantly because of the pandemic, more often identified these disinformation sources: WHO representatives, doctors, scientists, the Prime Minister, the health minister, and world superpower leaders. This group comprises managers and self-employed, and their distrust may be partly based on the fact that the state of emergency severely affected them by radically changing business and employment conditions.

Exploring the respondents’ reactions to disinformation on SNS, we discovered that one third (33%) did not do anything, 19% do not use SNS, and 17% have not encountered disinformation (Table 3).

Table 3: What is your reaction when you see information about COVID-19 on SNS which you think is false and misleading? You can choose several answers.

The statements:

- A: I verify the credibility of the source before sharing information on SNS.
- B: To get a broader insight, I also seek sources that I do not agree with.
- C: I contact the information provider and/or begin a discussion with them.
- D: I react with a negative emoji.
- E: I indicate that this information is false in a comment or when sharing it.
- F: I try to find out the source of this information.
- G: I alert my social circle that this information on the Internet is false.
- H: I alert the SNS administrator.
- I: I do something else.
- J: I do not do anything.
- K: I have not encountered such information.
- L: I am not using SNS.
- M: Hard to say/NA.

		A	B	C	D	E	F	G	H	I	J	K	L	M
Risk assessment	Total	13%	10%	2%	5%	2%	7%	4%	2%	1%	33%	17%	19%	4%
	Unconcerned (15%)	7%	8%	1%	4%	1%	7%	3%	1%	2%	32%	27%	18%	2%
	A little concerned (39%)	13%	10%	1%	4%	2%	8%	5%	1%	1%	35%	17%	18%	3%
	Moderately concerned (28%)	17%	14%	2%	6%	2%	9%	3%	2%	0%	32%	13%	16%	4%
	Rather and very concerned (7%)	43%	23%	0%	6%	6%	5%	8%	8%	13%	26%	37%	69%	4%
Significant (4%)	27%	28%	4%	11%	7%	22%	11%	7%	2%	27%	11%	15%	5%	

Changes	Moderate (37%)	17%	10%	3%	7%	3%	9%	6%	2%	1%	31%	14%	17%	4%
	Slight (56%)	9%	9%	1%	3%	1%	5%	2%	1%	2%	34%	20%	20%	4%

Source: Own processing

The group that does not react to disinformation on SNS comprises mostly people aged 25 – 34 (43%). Only 10% said they consider also sources they do not agree with. This group includes people aged 25 – 34 (14%), managers (15%), and those whose lives were significantly altered by the pandemic (28%). These groups were more likely to check the sources' credibility: people aged 25 – 34 (21%), employed in the public sector (18%), specialists (18%), people whose lives were moderately or significantly altered by the pandemic (27%), and those who are rather and very concerned about their COVID-19 risk.

Respondents were asked to express their attitude towards the most popular COVID-19 disinformation narratives (Table 4).

Table 4: Please select statements about COVID-19 that you believe to be true. You can choose several answers.

The statements:

- A: "To avoid COVID-19, one has to eat lots of fruit and vegetables."
- B: "COVID-19 is not dangerous to children."
- C: "COVID-19 can be avoided and cured by vitamins, folk remedies, etc."
- D: "Hot sauna can improve immunity against COVID-19."
- E: "COVID-19 is like flu and hundreds of other viruses, there is no need to pay so much attention to it."
- F: "If I do not smoke and am physically active, then I won't get the virus, or my illness will be light."
- G: "The chaos caused by COVID-19 is beneficial to politicians."
- H: "COVID-19 restrictions will lead to the collapse of Latvia's economy."
- I: "COVID-19 pandemic is ruled by global corporations lead by people like Bill Gates or George Soros."
- J: "COVID-19 test causes brain damage."
- K: "COVID-19 is linked to 5G network."
- L: None of these statements.
- M: Hard to say/NA.

		A	B	C	D	E	F	G	H	I	J	K	L	M
Risk assessment	Total	9%	8%	9%	7%	17%	11%	30%	15%	9%	2%	3%	38%	7%
	Unconcerned (15%)	9%	8%	10%	8%	15%	12%	23%	13%	10%	4%	3%	48%	3%
	A little concerned (39%)	6%	9%	7%	6%	20%	11%	29%	17%	11%	1%	3%	39%	5%
	Moderately concerned (28%)	10%	5%	7%	5%	13%	10%	37%	14%	8%	2%	3%	39%	7%
	Rather and very concerned (7%)	10%	12%	31%	26%	24%	24%	58%	26%	19%	2%	10%	71%	15%
Significant (4%)	7%	2%	7%	9%	24%	9%	30%	21%	14%	0%	5%	37%	18%	

Changes	Moderate (37%)	9%	11%	9%	6%	16%	11%	28%	14%	9%	2%	3%	37%	6%
	Slight (56%)	8%	7%	8%	6%	17%	12%	30%	14%	10%	2%	2%	39%	7%

Source: Own processing

Statements that had the highest credibility rate point to low confidence in political decisions and criticism of the government's work: 30% agreed that COVID-19 is beneficial to politicians, 15% agreed that government measures can lead to a collapse of the economy, and 17% agreed that COVID-19 is just like regular influenza. The most popular conspiracy theory about the origins of COVID-19 was the claim that the pandemic is manipulated by global corporations (9%). Meanwhile, 38% indicated they did not believe in any of these statements. These respondents have higher education (43%) and high income (53%). Disinformation had more credibility among people with basic education, employees of the private sector, and the unemployed, and among those employed in the public sector.

Respondents who had experienced major changes in life were more likely to think that the pandemic is manipulated by global corporations (14%). They also agreed that COVID-19 is like ordinary flu and the restrictions will lead to economic collapse. A large proportion of those who believed in disinformation saw their risk as low. This observation suggests that belief in disinformation may lower the disease risk perception. However, the unconcerned group less frequently agreed that the pandemic is beneficial to politicians than the moderately concerned.

Also, some of the very concerned indicated that they agree with some disinformation, such as the claims that vitamins, a healthy lifestyle, and hot baths are effective preventive measures against COVID-19. This group more often than others agreed that the chaos of the pandemic is beneficial to politicians, the restrictions will lead to an economic collapse, the COVID-19 pandemic is run by global corporations and is linked to the 5G network.

Regarding the COVID-19 containment measures, 15% agreed that their aim is to control the population; 11% thought that sanitisers can be harmful, and that wearing a mask could lead to CO₂ poisoning (Table 5). 6% of the respondents agreed that there is no need for restrictions because the infection rate in Latvia is low, and 6% thought that social distancing is unnecessary. 33% believed that the COVID-19 mortality statistics are misleading because these people died of old age or other pre-existing diseases.

Most respondents who denied the veracity of statistics and doubted the restrictions were unconcerned about their risk. The very concerned were more likely to believe all false messages on the list. 25% of the respondents did not agree with any of the disinformation statements from the list and 7% said they cannot answer. Among those who disagreed, there were more people with higher education (30%) and managers (40%).

Table 5: Please mark which statement seen on SNS or elsewhere in public you agree with. You can choose several answers. The statements:

- A: "The aim of COVID-19 measures is full control of the entire population, including microchipping."
- B: "Society is not told that it is possible to get poisoned by overusing disinfectants."
- C: "Statistics about COVID-19 deaths are deceiving because these people died of old age or previously existing conditions."
- D: "Wearing face masks can cause CO₂ poisoning."
- E: "Social distancing is an unnecessary burden on society."
- F: "There is no need for restrictions because Latvia has a low COVID-19 infection rate."
- G: None of these.
- H: Hard to say/NA.

		A	B	C	D	E	F	G	H
Risk assessment	Total	15%	11%	33%	11%	6%	6%	25%	7%
	Unconcerned (15%)	16%	11%	27%	12%	12%	9%	33%	6%
	A little concerned (39%)	15%	12%	37%	10%	6%	6%	23%	4%
	Moderately concerned (28%)	17%	7%	31%	12%	4%	4%	26%	6%
	Rather and very concerned (7%)	32%	27%	44%	22%	30%	11%	36%	13%
Changes	Significant (4%)	14%	9%	27%	7%	7%	11%	28%	13%
	Moderate (37%)	17%	8%	35%	10%	5%	7%	24%	6%
	Slight (56%)	14%	11%	32%	11%	7%	4%	25%	7%

Source: Own processing

4 Discussion

RQ1: How does the population of Latvia perceive the COVID-19 disinformation?

Before the pandemic, the confidence rate in the ability to recognise disinformation and false news on SNS in Latvia was close to the European Union average (very and somewhat confident: 68%, EU 71%; not very and not at all confident: 29%, EU 26%).³⁹ Our data indicate that COVID-19 disinformation diffusion in Latvia is relatively low. In general, only a minority (7% – 33%) agreed with any false claim about COVID-19. Those who rated disinformation as credible, indicated that they have not encountered any disinformation. This response suggests an inability to recognise disinformation in this group. Most supported by respondents (30%) was a claim that the pandemic is beneficial to politicians, and in this claim, we recognise the politicisation of the disinformation effect.⁴⁰

Disinformation in Latvia is perceived rather passively: one third of respondents do nothing to react to it, most respondents do not check information sources, do not alert their social circle about disinformation, and do not look for sources that they do not agree with. Sources of disinformation are more often recognised by people aged 25 – 34, with higher education and higher income, and the rather and very concerned.

39 EU: *Flash Eurobarometer 464. Fake News and Disinformation Online*. Released in March 2018. [online]. [2020-08-08]. Available at: <<https://ec.europa.eu/comfrontoffice/publicopinion/index.cfm/survey/getsurveydetail/instruments/flash/surveyky/2183>>.

40 See: HART, P. S., CHINN, S., SOROKA, S.: Politicization and Polarization in COVID-19 News Coverage. In *Science Communication*, 2020, Vol. 42, No. 5, p. 679-697.

Although other studies have discovered that digital information usage patterns create inequality among different groups in their ability to recognise disinformation,⁴¹ our findings do not support this argument. We found that respondents aged 64 – 75 encounter disinformation less often, but, when we analysed their perception of specific disinformation narratives, no significant differences were observed, i.e., respondents in this group have the same average ability to recognise false information as respondents in other age groups.

A quarter of respondents indicated that journalists are responsible for the dissemination of disinformation. It points to low trust in the media, characteristic of the Latvian media environment where instrumental journalism is dominant,⁴² the audience is linguistically divided,⁴³ and the influence of the Russian media is notable.⁴⁴ According to the social diffusion model, part of the audience perceives journalists as working against society's best interests.

In summary, our study confirms that a higher level of education and more active use of the media help people better recognise disinformation. This skill is related to a realistic perception of the threat of the disease and the ability and/or habit of following updates on COVID-19 and proactively looking for new information.

RQ2: How does the perception of COVID-19 disinformation correlate with the perceived disease risk?

Based on Brennen et al.'s term "pandemic vulnerability" coined in 2020,⁴⁵ we define "infodemic vulnerability": a heightened susceptibility to disinformation during the COVID-19 pandemic. The 'infodemically' vulnerable are those who either do not recognise disinformation or believe disinformation narratives to be credible. Their vulnerability is exacerbated by low perceived disease risk and significant perceived changes to one's life caused by the pandemic. Part of this group has low education levels.

The unconcerned respondents indicated that they encountered disinformation less often, and conversely, the rather and very concerned noticed COVID-19 disinformation more often. They were more active in verifying sources and alerting others about misleading information, yet they often indicated that they believe in conspiracy theories and false news. They were more likely to agree with statements that evoke strong negative emotions (restrictions are exaggerated and leading to economic collapse, mortality rate statistics is misleading). They agreed that scientists disseminate disinformation and believed that the pandemic is beneficial to politicians. These responses suggest that the rather and very concerned rely on a variety of sources and equally seriously consider both scientific facts and conspiracy theories.

The susceptibility to COVID-19 disinformation is also influenced by changes to daily routines caused by the pandemic. Those whose lives were more affected by the pandemic said that they encountered disinformation more often, and they also responded to it more actively than average. They agreed only with a few of the disinformation narratives and less often agreed with false claims that arise from a lack of knowledge (e.g., that children are safe from the virus). But they were worried about the pandemic's impact on the economy, blamed global corporations for causing the pandemic, and thought that COVID-19 is just like ordinary flu. We conclude that the infodemic vulnerability is increased by low perceived disease risk (among the unconcerned) as well as heightened perceived risk together with fear and anxiety (among the rather and very concerned).

41 SKIPPAGE, R.: *The Role of Public Service Media in the Fight against Disinformation*. Oxford: Reuters Institute, University of Oxford, 2020. [online]. [2020-08-08]. Available at: <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2021-02/RISJ_Final%20Report_RebeccaS_2020.pdf>.

42 See: DIMANTS, A.: Latvia: Different Journalistic Cultures and Different Accountability within One Media System. In EBERWEIN, T., FENGLER, S., KARMAŠIN, M. (eds.): *The European Handbook of Media Accountability*. London: Routledge, 2018, p. 143-149.

43 See: ROŽUKALNE, A.: *Monitoring Media Pluralism in the Digital Era: Application of the Media Pluralism Monitor in the European Union, Albania and Turkey in the Years 2018 – 2019 Country Report: Latvia*. EU: European University Institute, 2020. [online]. [2020-08-10]. Available at: <<https://op.europa.eu/en/publication-detail/-/publication/7d8bee8e-dd0e-11ea-adf7-01aa75ed71a1/language-en/format-PDF/source-220105331>>.

44 See also: ZELČE, V. et al.: *Latvijas mediju vides daudzveidība*. Rīga: LU Akadēmiskais apgāds, 2018, p. 551.

45 BRENNEN, J. S. et al.: *Types, Sources, and Claims of COVID-19 Misinformation*. Released on 7th April 2020. [online]. [2020-08-08]. Available at: <<https://reutersinstitute.politics.ox.ac.uk/types-sources-and-claims-covid-19-misinformation>>.

Practical Implications

Our research leads to several practical recommendations to the communicators. One recommendation is to ensure that up-to-date scientific facts and official guidelines on current restrictions and policies are always easily available across different media and SNS and, no less importantly, this information is straightforward and understandable. Because our study revealed the spread of inadequate disease risk perception (either too high or too low), steps should be taken in educating the population about their actual disease risk. More adequate assessment of one's disease risk could lead to higher degree of compliance with the pandemic restrictions and thus to lower chances of contagion.

However, because we found out that people's trust in government officials and journalists is low in general, we advise that communicators choose the most appropriate channels to address different groups of society. Our data show that some of these groups cannot be reached by standard communication channels such as announcements from the Ministry of Health broadcast in the evening news. A different approach is needed for those who distrust not only the government and the media but also the WHO, healthcare professionals, scientists, etc. Another recommendation to the communicators is to find relatable role models from different social groups. Such role models could be engaged as opinion leaders and informal 'ambassadors' of reasonable health behaviour during a pandemic (e.g., wear a mask, observe social distancing, vaccinate, etc.).

Another recommendation is to address the consequences of disinformation when its diffusion cannot be curbed or stopped directly. It is advisable to plan debunking campaigns against the most misleading and dangerous narratives, targeting the communication at those segments of society that are most 'infodemicallly' vulnerable. One way to approach the planning of such campaigns is to present the official information in formats and narratives that could generate equally strong affective responses as disinformation does, thus having better chances in the competition for the audience's attention. To carry out such campaigns successfully, the communicators first need to map the sources, formats, and distribution channels of those disinformation narratives that they are about to oppose.

Finally, we recommend building and strengthening the population's resilience against disinformation. Because we found out that disinformation in Latvia is perceived rather passively, steps can be taken to improve people's media and information literacy and especially the skills to find verified and reliable information on the Internet, to check the sources of that information, and to be able to discern trustworthy sources from manipulative and misleading ones.⁴⁶ When planning their outreach, the existing government and nongovernment initiatives in the field of information literacy could focus their efforts on the 'infodemicallly' most vulnerable groups. Another step that can be taken is broadening the impact of the already existing fact-checking initiatives by crowdsourcing.⁴⁷ Involving volunteer representatives from 'infodemicallly' vulnerable sociodemographic groups in their work, fact-checking initiatives can earn trust and popularise useful media consumption habits.

Limitations

Our findings apply only to the first wave of the COVID-19 pandemic in Latvia (March 12-June 10, 2020). The second state of emergency was announced in Latvia on November 9, 2020 and was lifted on April 6, 2021. During the second wave, new disinformation narratives emerged revolving around vaccination that require a separate study. Our research suggests that the perception of disinformation is also shaped by pre-existing opinions about the quality of politics and trust in the media, journalists, and government. But our survey does not provide data on respondents' political preferences or social identities. Further research in these areas would offer a broader perspective on the mechanisms that lead to acceptance of disinformation.

46 See: JONES-JANG, S. M., MORTENSEN, T., LIU, J.: Does Media Literacy Help Identification of Fake News? Information Literacy Helps, but Other Literacies Don't. In *American Behavioral Scientist*, 2021, Vol. 65, No. 2, p. 371-388.

47 Compare to: PENNYCOOK, G., RAND, D. C.: Fighting Misinformation on Social Media Using Crowdsourced Judgments of News Source Quality. In *Proceedings of the National Academy of Sciences*, 2019, Vol. 116, No. 7, p. 2521-2526.

5 Conclusions

We tested our hypothesis that the disinformation perception is influenced by the perceived disease risk and found it to be relevant. We discovered that perceived disease risk that is notably lower or higher than average can be linked to higher infodemic vulnerability. Especially vulnerable is the social group whose low perceived risk concurs with significant changes to their daily life routines caused by the pandemic. This group also demonstrates the higher degree of distrust in the government, journalists, and the media, as well as in healthcare professionals, WHO experts, and science in general. We suggest that this correlation be taken in account when planning further pandemic communication. Distrust in the media and official science can lead to greater exposure to disinformation, which can be further exacerbated by relatively low levels of information literacy, including insufficient ability to assess the trustworthiness of information and a habit of passive consumption of media and SNS content without checking and questioning the sources. Reliance on disinformation, meanwhile, can lead to ignoring and even actively resisting the restrictions and health behaviour guidelines implemented to curb the spread of the virus. Such actions can directly jeopardise public health.

To ensure a higher degree of adherence to restrictions and positive changes in health behaviour, communication should be tailored to different groups, depending on these group's level of trust in the media and other sources as well as on their perceived disease risk. Such tailoring should be accompanied by carefully planned debunking campaigns against the most harmful false news and conspiracy theories. The goal of these activities would be to strengthen trust in scientific facts within those audiences where it was weak, all the while making these audiences more resilient to new disinformation.

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