Research Article

From Lower Disease Risk Perception to Higher News Avoidance: Analysis of News Consumption and Attitude Toward COVID-19 News in Latvia

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ARTICLE INFO	ABSTRACT
	Recognizing that regular information during a pandemic helps societies navigate through a period of insecurity, the aim of this study is to understand how news about different aspects of the COVID-19 pandemic affects the attitude of media audiences towards news. This study seeks to explain the society's news consumption and the attitude towards COVID-19 news in Latvia linking it to self-evaluation of the perceived disease risk. A national survey data (September 2020, N=1,005) analysis shows a statistically significant but weak correlation between disease risk self-evaluation and the attitude towards pandemic news. Respondents who rate the risk of the disease as higher and real are more interested in news, consume news to create a sense of security, feel less fatigue towards news, and are less likely to avoid COVID-19 news. Respondents who believe that the risk of illness is low and unreal, are less interested in news, feel more tired, avoid the news more often.

INTRODUCTION

At the beginning of the COVID-19 pandemic in the spring of 2020, people all over the world encountered not only a vast volume of news but also a constant flow of information about the novel coronavirus (Casero-Ripollés, 2021), its symptoms, epidemiological safety measures, statistics of new cases, and deaths. At first, the attention toward news grew (Casero-Ripollés, 2021; COVID-19 Barometer, 2020; Newman et al., 2020), but by the middle of the year, data about exhaustion from COVID-19 news appeared (de Bruin et al., 2021; Fletcher et al., 2020); hence, COVID-19 has served those citizens furthest away and less interested in the news to reconnect with the information about public affairs (Casero-Ripollés, 2020).

In Latvia, the media created special sections for the COVID-19 pandemic, and commercial online news portals announced that they are removing the paywall for information related to the pandemic.

To contextualize media consumption, it should be mentioned that Latvia's 1.92 million inhabitants increased online media consumption at the beginning of the pandemic. The use of media is determined by the ethnic structure of society in Latvia. Representatives of different ethnical groups acquire their daily

information from different sources. Latvians generally trust and use the media in Latvian, whereas the Russian-speaking prefer the TV channels controlled by the Russian government (NEPLP, 2017, 2018, 2020). The population still prefers television over other media (89% of respondents) (NEPLP, 2020), 83% of the population listen to the radio, 79% read news on the Internet, 72% use social media, 71% read the press in print or online.

COVID-19 news mostly is characterized by negative connotations, this is a reason why extensive news consumption during a course of pandemic may affect media users' mood (Igartua et al., 2020). The COVID-19 news causes fear of illness, exacerbates insecurities about the economic situation (Zalc & Maillard, 2020), increases stress, and forms a part of what was named 'pandemic fatigue' or 'society's fatigue' (SKDS, 2021). During the pandemic news gives to society knowledge about the virus and how to avoid it, helps to observe restrictions, changes one's behavior. These are also the reasons why attitude towards COVID-19 news can differ from general news evaluation and is only partly comparable to other news fatigue studies (Fletcher et al., 2020; Jurkowitz, 2020). During the COVID-19 pandemic, the number of studies on the consumption (Igartua et al., 2020) and the perception of pandemic news is growing (Aharoni et al., 2021; de Bruin et al., 2021; Villi et al., 2021), still research on news-specific topics is rare.

The focus of our study is the interrelation between COVID-19 news and the society's attitude towards news, examining a theoretical link of how perceived COVID-19 disease risk is related to news fatigue and avoidance of pandemic news since the perceived risk of disease shows the perception of the risks to well-being and health (de Bruin & Bennett, 2020; Siaki & Loescher, 2011). The objective of study is to analyze society's news consumption and the attitude towards COVID-19 news linking it to self-evaluation of perceived disease risk.

Given that the pandemic has created unique circumstances in the news consumption and attitude towards news, the data was interpreted through media uses and gratification theory with a focus on activity and passivity factors in the media use (Deuze, 2020; Katz et al., 1974; Levy & Vindahl, 1984; McQuail, 2010; McQuail & Deuze, 2020; Rubin, 1993; Ruggiero, 2000) and health behavior theories of perceived disease risk (Brewer et al., 2004, 2007). To emphasize the interrelation between public opinion and individual attitude, we used the health belief model (Brewer et al., 2007). According to the model, any stimuli related to health create two assessments–the perceived threats and the overcoming of the threats. If a person does not feel a threat of getting infected (or other negative health-related outcomes), then there is no need to prevent the chance that it may happen (Sarwar et al., 2020).

Recognizing audience's attitude toward pandemic news is generally unclear, the concept of audience activity or what the audience does with the media and their content defined by uses and gratification theory is useful in our study, especially in relation to the audience's ability to interact with other media users and evaluate media content (Jenkins, 2006; Kramp et al., 2016), which helps to determine the meaning of pandemic news. From the list of categories of social and psychological needs of an individual's media use defined by the media uses and gratification theory (Severin, 2000, p. 334), the need to be able to monitor the processes taking place in society is selected for our research. We defined COVID-19 news-related activities in the context of the desire of the audience to find out the latest information about COVID-19, to discuss it with others, and to use COVID-19 news in various social situations.

People use the news to fulfill psychological goals (Sweeny et al., 2010), therefore, we used psychological impact factors, such as helplessness, apathy, and others, to characterize the attitude toward COVID-19 news. Although researchers have paid attention to various aspects of news fatigue and news avoidance, both concepts are still unclear and diffuse, thus, we operationalized these phenomena by explicitly asking respondents how they consume pandemic news and what is their attitude towards COVID-19 news.

We interpreted the perceived risk of disease within the context of data about respondents' disease risk perception. Health behavior in coronavirus COVID-19 context can be considered both preventive, defined by recommended guidelines, and harmful, meaning endangerment of oneself and others by breaching safety rules and disregarding the seriousness of the disease.

The following research questions are proposed:

1. **RQ1.** What are relations between the perceived risk of disease and COVID-19 news consumption?
2. **RQ2.** How does the perceived risk of the disease correlate with attitude towards COVID-19 news?

Since news provides an opportunity to quickly react to the changing events and conditions, our study is based on the premise that during the COVID-19 pandemic, society's news fatigue and avoidance of pandemic-related news can cause serious consequences to public health and reduce society's endurance during the crisis.

LITERATURE REVIEW: NEWS FATIGUE AND NEWS AVOIDANCE

News fatigue and news avoidance (Karlsen et al., 2020) are key indicators of changes in audiences' media use and attitudes towards news. Analyzing the relationship between news audiences and news in public communication environment, scholars offer explanations based on changes in the amount and speed of information. As the information circulation involved more and more information providers, researchers noted an ironic (Song et al., 2017) situation that there is more news than ever (Fedeli & Matsa, 2018), but at the same time, it creates an overload for the users and forces them to be more selective in volume and dedicated time (de Bruin et al., 2021). The flood of news leads to consequences that impact the audience's use and attitude towards news, as the huge volume exacerbates both fatigue (Fletcher et al., 2020; Park, 2019; Song et al., 2017; Yang & Kahlor, 2013) and apathy toward news.

News fatigue has been studied in a variety of aspects, mainly as a response to the abundance of news in the overall flow of information. The structure of modern information environment, in which public interest issues compete with a huge amount of other content (Casero-Ripollés, 2021), is also important in explaining news fatigue. News usage approaches can create a new information gap for different user groups (Ferreira & Borges, 2020) because while those interested in information search for news and can become more avid consumers, those less interested will increasingly avoid news by choosing other types of content and following the view that important information will reach them (Zuñiga & Diehl, 2019).

Therefore, in audiences' survey-based news fatigue research on changes in news use, it is not always possible to make a clear distinction between media audience attitudes towards news and other types of information available. However, studies identify at least three news-related aspects. First, an increase in news and information volume or news overload (de Bruin et al., 2021; Eppler & Mengis, 2004; Farhoomand & Drury, 2002; Song et al., 2017). It describes the inability to learn the available information and refers not only to the content offered by the media but to the information that a person receives every day on different devices and a variety of issues (Eppler & Mengis, 2004; Farhomand & Drury, 2002). Secondly, news fatigue is linked to an increase of the information speed, which reinforces overload and makes it difficult to process information and decide on its use (Bawden & Robinson, 2009; Song et al., 2017), thus creating news avoidance. Thirdly, important for our study are researchers' conclusions that there are too many messages relating to a particular subject or field in a common range of messages, and an overload with messages of certain content, such as politics, elections (Anderson & Quinn, 2019; Gottfried, 2016, 2020).

Several studies have interpreted the growth in news volumes in the context of the increase of the use of social media (Bright et al., 2015; Holton & Chyi, 2012; Park, 2019; Shearer, 2018; Shearer & Gottfried, 2017) and of the time spent for the use of news (Pentina & Tarafdar, 2014) linking change in audiences' attitude toward news with their information diet (Frissen et al., 2020).

The increase in information and news volume has contributed to the interest of researchers identifying an audience group called 'news resisters' (Fischer et al., 2008; Woodstock, 2014) that deliberately avoids news because they want to be more relaxed, not to be bothered by unimportant and negative news. If the perception of information overload is increased, the avoidance of news will also increase (de Bruin et al., 2021; Misra & Stokols, 2012). When analyzing news fatigue and news avoidance, it is very difficult to distinguish between attitudes towards news (specifically, the causes and degree of fatigue) and the actual behavior of media users in relation to news use. Another aspect that creates difficulties analyzing the studies' results is the variability and instability of both phenomena and everyday life events that affect individuals' media consumption. Therefore, most studies' results present an overall assessment, often media users' self-evaluation of news fatigue and news avoidance.

In the context of the objective of this study, news fatigue and news avoidance are seen as a result of news overload (Song et al., 2017) during the pandemic, the uniformity of news content, and the attitude toward the COVID-19 news.

News Fatigue

News fatigue is caused not only by the growing number of news channels and platforms but also by technical means which give people constant notifications of new news headlines from their smart device apps. Not necessarily is news fatigue linked to the impact of the Internet (Van den Bulck, 2006), but most data show that the flow of digital information is increasing fatigue (York, 2013; York & Turcotte, 2015), while the use of the media means the continued selection of information (Powell et al., 2020), which increases fatigue caused by the growing amount of energy needed to cover and process news information. Thus, two factors are important for understanding news fatigue–the use of media and the audience's attitude toward news. In the US, two-thirds of those surveyed (Gottfried & Barthel, 2018) admit exhaustion due to a large amount of news, and news fatigue is growing steadily (Gotfried, 2020). News fatigue causes all signs of high-level stress (powerlessness, pessimism) as the flow of news acts like continuous noise, writes (Song et al., 2017). With huge news selection choices, news fatigue is the main reason for declining news consumption (Park, 2019). But these findings cannot be generalized, because news fatigue also has a link to news content, namely that the news of interest causes less fatigue (Holton & Chyi, 2012), while a higher need for specific news will lead to a lower desire to avoid them (Song et al., 2017). In the context of our study, these findings led us to look for active media use-related factors that may influence 'interest' in news and news usage during a pandemic.

News Avoidance

News fatigue, if accumulated, has the potential to lead to news avoidance, ignoring daily news (Savolainen, 2007), and changing media audiences' news usage habits. A comparative study on the use of news in the digital environment (Newman et al., 2017) revealed that more than half of media users sometimes avoid the news. Avoidance is one way for people to cope with excessive and worrying amounts of information (Park, 2019; Song et al., 2017). Studies show that young audiences' news consumption is characterized by constant avoidance of news (Edgerly et al., 2018). If there is too much information, people have a lower motivation for its processing (Eppler & Mengis), they try to be more selective (Janssen & de Poot, 2006) or try to exclude the news from their information diet (Islam et al., 2018).

As key factors of news avoidance, academic literature most commonly mentions such psychological factors as growing stress, confusion, irritability, powerlessness, boredom, cognitive impairment (Crook et al., 2016; de Bruin et al., 2021; Song et al., 2017; van der Bulk, 2006; York & Turcotte, 2015).

Avoidance of news and avoidance of information is not the same. Studies evaluating people's attitudes to health information through psychological approaches (Sweeny et al., 2010; Wilson, 1999; Yaniv et al., 2004) analyzed human behavior when individuals seek to avoid or postpone finding out potentially unwanted information, protect themselves from uncertainty, or ignore already known information. Sweeny et al. (2010) write that avoidance is affected by selective exposure, grounded in dissonance theory, which claims that people generally avoid information that does not correspond to their views. Information avoidance means exercising the self-protection function (Sweeny et al, 2010) because people are unable to cope with the extensive flow of bad news (Hua & Howell, 2020).

COVID-19 news leads to a sense of uncertainty, anxiety, fear, and frustration (Zalc & Maillard, 2020) at public and individual levels. News usage increased in Britain during the pandemic, but at the same time, the number of people avoiding news also increased (Fletcher et al., 2020). People mostly avoid TV, websites, and social media news, more than half of respondents in Flecher et al.' (2020) survey admit they avoid the news because news negatively affects their mood or seems unreliable.

A different picture was observed in the US, where presidential elections were held during the year of the pandemic. Data shows (Jurkowitz, 2020) that the US public followed coronavirus news more than news of the election campaign.

Overall, extreme news avoiders make up a very small proportion (3% worldwide, 6% in the US), but as the number of alternative news channels grows, the researchers foresee an increase in this figure (Palmer & Toff, 2019).

Perceived Risk of Disease

Awareness of the risk of disease is directly linked to a person's participation in health preservation, which has been emphasized throughout centuries ever since Hippocrates (Siaki & Loescher, 2011). During the COVID-19 pandemic, the population received many recommendations on how to preserve their health by changing their behavior. Health behavior includes everything that influences a person's physical, mental, emotional health like actions that protect or improve health, and activities that impair one's health.

To change behavior or to maintain changes in behavior, there is a necessity for recognition or perception of the risks to well-being and health (Siaki & Loescher, 2011). Perceived risk to disease is an integral part of health communication models (Becker et al., 1978; Petty & Cacioppo, 1986) and health behavior change theories (Siaki & Loescher, 2011).

This research conceptualizes the COVID-19 situation as a change in health behavior, using the part of the health belief model (Becker et al., 1978; Rosenstock, 1974) in data analysis, which characterizes perceived susceptibility and perceived severity or seriousness of disease (Mārtinsone & Sudraba, 2016). According to the model, any stimuli related to health create the assessment of perceived risk and the possible overcoming of this risk (Sarwar et al., 2020).

To define perceived risk to disease, this study focuses on subjective confidence or assessment of a person's vulnerability to health threats (Brewer et al., 2004).

Publicly available information helps individuals to better understand disease risk (Lee et al., 2010), because the perceived risk is not always related to actual risk (van der Weijden et al., 2007) and, conversely, failed communication can cause uncertainty about the ability to evaluate illness risk (Orom et al., 2020). This is the reason why research participants were asked to assess their health state and risk of disease for themselves and their families.

METHOD AND DATA

The survey (1,005 respondents aged 18-75) was conducted using the web panel survey (CAWI) in September 2020, between the first and the second wave of the pandemic. The sample of quotas was used to form the sample of the survey; the data were weighted according to the data of the Population Register of the Office of Citizenship and Migration Affairs of the Ministry of the Interior of the Republic of Latvia on January 27, 2020. The sample was representative regarding gender, age, region, and ethnicity. However, as respondents were active Internet users, there is a systematic error (e.g., regarding education).

Survey consisted of three question blocks with closed statements using 5-point Likert scale questions to clarify attitudes about COVID-19 news. The first group relate to the behavior of the respondent concerning the news, namely by requiring the survey participants to assess the extent to which they follow the information, what are their patterns of using the information.

The second group of statements includes self-evaluation of news fatigue and news avoidance (e.g. *I have lost interest, am tired of COVID-19 news, I avoid news about COVID-19, follow them rarely*). The third statement group was related to the psychological mood of respondents - assessment of feelings of security or insecurity related to COVID-19 information, depression, feelings of helplessness, indifference, feelings attributable to the veracity of the information provided (e.g. *I don't trust that the news tells the truth about COVID-19*, *News about COVID-19 takes up too much time*, *I don't trust that the news tells the truth about COVID-19*). This group of questions reflects the attitude as it records respondents' judgments, feelings, and opinions of the COVID-19 news.

The SPSS program was used for the initial processing of the data, comparison, and grouping, mainly using the functions of descriptive statistics and correlation analysis were employed for data evaluation. A correlation method (Spearman's correlation coefficient) was chosen for survey data analysis to find out whether there is a relationship between variables of the perceived risk and usage and attitude on COVID-19 news and how strong relationship is.

Table 1. Risk perception index (September 2020, N=1,005)

Group of respondents	September 2020, %
Unconcerned	10
A little concerned	42
Moderately concerned	33
Rather concerned	9
Highly concerned	2
NA	5

RESULTS

Assessment of the Perceived Risk of Disease

The data obtained in the survey were compared to assess the risk perception of COVID-19 in the Latvian population. Respondents were asked how high they evaluate the risk of COVID-19 for themselves, for their family, relatives and for society in general (**Appendix A**).

In September 2020, nearly half of respondents (46%) assess their disease risk as low but real, 22% believe that risk is moderate and real. The disease risk as low and almost unreal was assessed 11% for family and 7% for society in general. 14% of respondents think the risk for themselves is low and almost unreal, 9%–high and real, 3%–very high and very real. Thus, two-thirds of respondents (68%) consider the risk as real, each sixth as unreal (14%), and 12% as real and high. The disease risk was assessed as real for family (70%) and for society in general (71%) was evaluated very close to assessment for themselves (**Appendix A**).

Based on data, risk perception index (**Table 1**) was created and was used to analyze the relationship between risk perception and attitude toward COVID-19 news and the strength of the correlation between both variables. Using scale 1-5 [low and almost unreal (1), low but real (2), moderate and real (3), high and real (4), and very high and very real (5)] the mean of answers to all three questions were calculated. As a result, five groups were created 'unconcerned' [1(min)-1.49], a little concerned (1.50-2.49), moderately concerned (2.50-3.49), rather concerned (3.50-4.49), and highly concerned [4.50-5(max)].

Risk perception index shows a distinction between the unconcerned (10%), the little concerned (42%), moderately concerned (33%), rather concerned (9%), and highly concerned (2%).

Pandemic News Consumption and the Attitude Toward News: General Trends

Assessing the defined groups' attitudes to the risks of COVID-19, the study further analyses attitudes to the news using the survey data. In general, the attitude toward news is not determined by belonging to specific socio-demographic groups, but we can observe that more often than average being 'unconcerned' were admitted by men, age group 25 to 34, people with basic education, workers, while 'rather concerned' and 'very concerned' more often than average were respondents with high levels of education, elderly people (64-75 years). Thus, a relationship can be observed between the attitude toward COVID-19 news and the level of concern of the individual, while attitudes are affected mainly by the level of education.

Analyzing public's attitude about COVID-19 news during pandemic, conflicting data were obtained: more than half (55%) of respondents tend to follow the latest information and a similar number (53%) say they lose interest and feel tired of the news, while a third (32%) avoid news on COVID-19. According to the survey, each fifth (20%) is actively seeking additional information, informing other people (21%) of the key events concerning COVID-19. Still only 6% of respondents agree that they are involved in discussions on social media on COVID-19 (**Table 2**).

When answering questions about the psychological impact of COVID-19 news (**Table 3**), respondents provide answers that describe the attention toward complex information and psychological reactions to troubling news. A relatively large proportion of respondents (39%) do not trust that the news about COVID-19 tell the truth; however, 39% of respondents disagree that following news about COVID-19 takes too much of their time and 48% of respondents disagree that news about COVID-19 leads to disputes, which they prefer to avoid. 38% of respondents agree that they are indifferent, 37% believe that the news helps to feel safer and plan ahead, 28% of respondents feel overwhelmed by the news and they reduce their willingness to

Table 2. How has your consumption of news and other information on COVID-19 changed after the state of emergency? (N=1,005)

	FA	RA	NAND	RD	FD	DS/NA
I try to keep up to date with the most important news	20%	35%	20%	12%	12%	2%
I have lost interest; I am tired of COVID-19 news	27%	26%	23%	13%	8%	3%
I avoid news about COVID-19, rarely follow	15%	16%	25%	23%	18%	3%
I keep friends, relatives, and my social media contacts up to date on COVID-19	4%	17%	20%	21%	35%	3%
I actively seek additional information about COVID-19 (e.g., follow vaccine researcher announcements, scientist discussions, listen to scientist podcasts and/or read researcher blogs)	4%	16%	22%	25%	31%	2%
I participate in social media discussions on COVID-19 news	2%	5%	16%	24%	51%	4%

Note. FA: Fully agree; RA: Rather agree; NAND: Neither agree, nor disagree; RD: Rather disagree; FD: Fully disagree; DS/NA: Difficult to say/Not available

Table 3. What is your attitude toward news about COVID-19? (N=1,005)

	FA	RA	NAND	RD	FD	DS/NA
I don't trust that the news about COVID-19 is telling the truth	16%	23%	27%	16%	12%	6%
News leaves me indifferent because there is little news that is important to me	14%	24%	25%	19%	12%	6%
I feel safer, I can plan my life	9%	28%	30%	12%	13%	8%
Following news about COVID-19 takes too much of my time	12%	17%	25%	20%	19%	7%
The news depresses me, reduces my desire to follow the news	11%	17%	25%	22%	20%	5%
The news makes me anxious, makes me pay more attention to COVID-19, to respect the rules and restrictions	4%	23%	27%	20%	22%	5%
I feel increasingly insecure because of uncertainty and conflicting or insufficient information	6%	16%	31%	21%	17%	8%
News about COVID-19 leads to disputes, which I prefer to avoid	8%	13%	24%	19%	29%	8%
When I see or hear news about COVID-19, I feel helpless	3%	10%	25%	24%	32%	6%

Note. FA: Fully agree; RA: Rather agree; NAND: Neither agree, nor disagree; RD: Rather disagree; FD: Fully disagree; DS/NA: Difficult to say/Not available

follow, 27%–feel alarmed and acknowledge that the news is encouraging to comply with restrictions, 22% agree that they feel increasingly insecure because of insufficient and conflicting information, and 13% agree that they feel helpless when they hear the news on COVID-19.

Further analysis of data shows people's attitudes and assessment of news content, as well as psychological reactions and behavior related to COVID-19 news usage, depending on their affiliation in the groups identified for the study by the risk perception index, in which respondents are classified according to their disease risk assessment.

The desire to actively seek information is clearly more pronounced among 'highly concerned' respondents (61%) as well as try to keep up to date with the most important news (86%). The level of concern does not have a direct link to the desire to engage in discussions on social media, but those who are highly concerned claimed it more frequently (12%) than average (6%). Overall, respondents' responses show that the level of involvement in social media discussions is low. The same groups are also more often expressed as providing useful information to other people: people with an increased level of concern are more likely to inform other people about COVID-19. Each fourth in the moderately concerned group (25%), each third (31%) in the rather concerned group, and more than half (55%) of very concerned respondents agree with statement that they inform others about the latest related to COVID-19 (**Table 4**). In the moderately concerned group, each fourth (25%) and in the rather concerned group each third (31%), and more than half (55%) of very concerned respondents agree that they inform others about the latest related to COVID-19. Among the 'rather concerned' respondents, 27% agree that they actively seek pandemic information (among unconcerned respondents– 11%) (**Table 4**).

Fatigue from the volume of the pandemic news and their content can take the form of behavior that is contrary to interest in the news. A third (32%) of respondents agree to avoid news on COVID-19, rarely the following news on the matter. The answers of the respondents to this claim differ significantly between the groups selected for the study. In the unconcerned group, three-quarters (76%) agree, a third (32%) of the

Table 4. How has your consumption of news and other information on COVID-19 changed after the state of emergency? (N=1,005)

	AR (unw. n=1,005)	U (unw. n=98)	LC (unw. n=424)	MC (unw. n=328)	RC (unw. n=84)	HC (unw. n=16)
I try to keep up to date with the most important news	55%	21%	55%	65%	63%	86%
I have lost interest, tired of COVID-19 news	53%	84%	54%	46%	44%	32%
I avoid news about COVID-19, rarely follow	32%	76%	32%	19%	19%	20%
I keep friends, relatives and my social media contacts up to date on COVID-19	21%	9%	19%	25%	32%	55%
I actively seek additional information about COVID-19 (e.g., follow vaccine researcher announcements, scientist discussions, listen to scientist podcasts and/or read researcher blogs)	20%	11%	18%	24%	27%	61%
I participate in social media discussions on COVID-19 news	6%	7%	5%	6%	9%	12%

Note. AR: All respondents; U: Unconcerned; LC: A little concerned; MC: Moderately concerned; RC: Rather concerned; HC: Highly concerned

Table 5. Correlation matrix on risk assessment and usage of COVID-19

Spearman's rho	CC	Sig. (2-tailed)	N
I try to keep up to date with the most important news	-.274**	0	936
I have lost interest, tired of COVID-19 news	.242**	0	926
I avoid news about COVID-19, rarely follow	.287**	0	932
I keep my friends, family and contacts on social media up-to-date on COVID-19	-.234**	0	929
I actively seek additional information about COVID-19 (e.g., follow vaccine researcher announcements, scientist discussions, listen to scientist podcasts and/or read researcher blogs)	-.214**	0	936
I participate in social media discussions on COVID-19 news	-.104**	0.002	922

Note. CC: Correlation coefficient; **Correlation is significant at the 0.01 level (2-tailed)

slightly concerned, in the other groups, starting with moderately concerned respondents, support for the claim to avoid news is no higher than a fifth of the respondents (19%-20%).

The more concerned respondents try to follow the most important news, engage in discussions, actively seek information, and inform others, at the same time more concerned survey participants more often do not agree that they have lost interest and avoid pandemic news.

The additional analysis show that correlations are weak but statistically significant: the higher the level of concern, the more likely respondents report active following the news, informing others about the news, seeking additional information, and participating in discussions, but less likely to report losing interest or avoiding the news (**Table 5**).

Attitude Toward News Depending on the Perceived Risk of Disease

When analyzing respondents' attitudes toward COVID-19 related news we can observe certain tendencies. As in other issues related to regular information on COVID-19, the information gives a higher sense of security.

Respondents with lower levels of concern are significantly less likely to associate information with a sense of security than more concerned respondents (**Table 6**). On average, each fifth (22%) respondent feels insecure due to the overall uncertainty and contradicting or insufficient information, more than a third of the rather concerned (32%), and highly concerned respondents (37%) admit that they feel unsafe, therefore insecurity is increasing with the level of concern about disease risks. Generally, COVID-19 news causes a sense of helplessness rather rarely (13%). However, almost a third of the rather concerned (29%) agree that they are overcome by a feeling of helplessness, while only 7% are feeling hopeless among unconcerned respondents when they see and hear the news of COVID-19. More than half of respondents agree or partly agree (54%) that the news of COVID-19 is alarming. The worry caused by the news and its motivated behavior, the willingness to comply with the rules also entails an assessment of the risk of the disease. A third of all respondents (27%) agree that the alarm generated by the news leads to compliance with the rules and restrictions. Among unconcerned respondents, only 5% have acknowledged that alarm leads to an increased focus on the rules. The alarm is increasingly recognized by respondents from the moderately concerned group (34%), rather concerned (44%), and three-quarters of the very concerned (74%) respondents.

Table 6. How following news about COVID-19 affects you? (N=1,005)

	AR (unw. n=1,005)	U (unw. n=98)	LC (unw. n=424)	MC (unw. n=328)	RC (unw. n=84)	HC (unw. n=16)
I don't trust that the news about COVID-19 is telling the truth	39%	64%	39%	31%	40%	31%
News leaves me indifferent because there is little news that is important to me	38%	69%	44%	30%	17%	13%
I feel safer, I can plan my life	37%	16%	36%	47%	43%	57%
Following news about COVID-19 takes too much of my time	29%	45%	33%	22%	22%	33%
The news depresses me, reduces my desire to know the news	28%	49%	26%	26%	26%	25%
The news makes me anxious, makes me pay more attention to COVID-19, to respect the rules and restrictions	27%	5%	24%	34%	44%	74%
I feel increasingly insecure because of uncertainty and conflicting or insufficient information	22%	23%	19%	25%	32%	37%
News about COVID-19 leads to disputes, which I prefer to avoid	20%	28%	23%	16%	15%	27%
When I see or hear news about COVID-19, I feel helpless	13%	7%	12%	14%	29%	18%

Note. AR: All respondents; U: Unconcerned; LC: A little concerned; MC: Moderately concerned; RC: Rather concerned; HC: Highly concerned

Table 7. Correlation matrix on risk assessment and attitude toward the news on COVID-19

Spearman's rho	CC	Sig. (2-tailed)	N
I don't trust that the news about COVID-19 is telling the truth	.182**	0	902
News leaves me indifferent because there is little news that is important to me	.324**	0	910
I feel safer, I can plan my life	-.242**	0	886
Following news about COVID-19 takes too much of my time	.141**	0	900
The news depresses me, reduces my desire to know the news	.084*	0.011	911
The news makes me anxious, makes me pay more attention to COVID-19, to respect the rules and restrictions	-.352**	0	916
I feel increasingly insecure because of uncertainty and conflicting or insufficient information	-.143**	0	884
News about COVID-19 leads to disputes, which I prefer to avoid	0.053	0.117	890
When I see or hear news about COVID-19, I feel helpless	-.215**	0	913

Note. CC: Correlation coefficient; *Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed)

A relatively large proportion of respondents do not trust information about COVID-19, doubting its veracity, failing to rely on it. More often, the unconcerned respondents say this, while the concerned group indicates it less frequently. In general, 39% agree that news cannot be relied on, while the statement is supported by two-thirds of the respondents (64%) in the unconcerned group.

However, around a third of the respondents (28%) feel overwhelmed by COVID-19 news, 25% partly agree. Of those who don't feel threatened–the unconcerned and little concerned (49% and 26%, respectively) agree that COVID-19 news is overwhelming. Among other respondent groups, there are no significant differences. Overall, more than a third (38%) of respondents admit that the news creates indifference. The unconcerned (69%), and little concerned (44%) respondents more often say that the news causes indifference, in the more concerned groups, indifference decreases, with an increasing level of excitement–amongst very concerned only 13% agree that the news causes indifference. A third of the respondents (29%) think that news is time-consuming, this is more often indicated by the unconcerned and less frequently by the concerned groups. Similarly, to other categories related to news perception, time consumption is indicated as a burden by the unconcerned group (45%), but also other groups (22%-33%) say that COVID-19 news takes too much time.

The statistical analysis indicates weak but statistically significant correlations: the higher the COVID-19 risk score, the more likely it is to say that following the news makes one feel safer, plan one's life, the news is worrying, makes one pay more attention to COVID-19, follow rules and restrictions, but the more likely it is to say that the news makes one feel unsafe because of uncertainty and insufficient and conflicting information, and promotes helpfulness (**Table 7**). On the other hand, the less concerned respondents are about the risks of COVID-19 the more likely they are to say that they do not trust the news because it does not tell the truth, the news leaves them indifferent because there is little news of importance to them, following the news takes too much time, the news is depressing.

CONCLUSIONS AND DISCUSSION

In crisis situations, the news consumption is growing and the impact of news on society is increasing (Ferreira & Borges, 2020). Analysing the two-dimensional public information environment (Casero-Ripollés, 2021), our study focused more on the demand dimension than on the supply dimension, as we analysed pandemic news consumption and attitudes towards news.

In the context of our study, news consumption and the attitude toward news is determined by the disease risk perception. We assumed that the degree of news fatigue and avoidance was easier to assess by examining the attitude towards news on a particular topic, in this case, COVID-19, thus, the correlation analysis shows a link between variables of risk of illness and news consumption. In general, assessing the relationship between the perception of the disease risk, and the news consumption and attitude toward news, it can be concluded that the perception of risk of disease correlates with the activity in the news consumption. It shows that both variables tend to correspond to each other, but the relationship is not very strong. The assessment of the disease risk makes a higher impact on the consumption of the news rather than on attitudinal factors like lack of trust in news, indifference, helplessness, news fatigue, and avoidance of COVID-19 news. Using the media use and gratification approach, we can conclude that the audience's need to follow current events on the pandemic and news consumption activity can be influenced by disease risk perception, while the perception of disease risk does not affect the development of the news fatigue to the same extent.

Answers to Research Questions

RQ1. What are relations between the perceived risk of disease and COVID-19 news consumption?

Latvian residents' interest in news and their readiness to follow information about COVID-19 is relatively stable. Three-quarters of respondents regularly follow the latest information, although at the same time respondents acknowledge that they feel tired of the news. Fatigue, formed in the longer term by following disturbing and uniform information, does not mean people do not follow the key events. Interest in the news is increased by the need to follow it, which is associated with a high perception of risk. Perception of disease risk is an important factor for the use of pandemic news to be related to audience activity, i.e., respondents who perceive the pandemic as real more often are active news consumers.

Representatives of the little concerned and moderately concerned groups think their risk of disease is real, and the perception of news expressed by these groups reflects the society's general attitude toward COVID-19 news. According to data, the biggest differences are found in the unconcerned group and representatives of rather and highly concerned groups. The attitude of these group representatives toward news positively correlates with the lack of interest of the unconcerned group. Representatives of the unconcerned group who think their risk of disease is low and unreal are less frequently interested in the latest information, they feel more tired of the news, they avoid news more often and use news in a more passive manner. A high assessment of disease risk is positively correlated with a higher interest in news, lower fatigue, and avoidance among rather concerned and very concerned respondents.

The most concerned group of respondents who assess the risk of getting sick as high and real are interested in the latest information, discuss it with others, and feel a higher sense of safety if informed. Representatives of this group acknowledge fatigue, but they avoid COVID-19 news less frequently than representatives of other groups.

Interest in news and what audiences do with news is statistically significant but moderately related to the assessment of pandemic severity and disease risk perception.

RQ2. How does the perceived risk of the disease correlate with attitude towards COVID-19 news?

Data on the audiences' attitude toward COVID-19 news shows the psychological and emotional effects of news. In line with McQuail and Deuze (2020) who demonstrate that one of the news's most important functions is to provide clarity, orientation, this study shows that more than half of those surveyed agree or partly agree that following news creates a sense of security and an opportunity to plan their life. Even more, our conclusions follow the media use and gratification theory findings that active pandemic news users experience less news fatigue, thus, activity means higher gratification achieved during media use.

The high interest of respondents in COVID-19 news and the fatigue of more than half of respondents are contradictory, a third of respondents admit that they avoid, a fourth sometimes avoid COVID-19 news. A higher risk assessment is related to a higher sense of security if the respondent follows the COVID-19 news, as well as a higher level of helplessness. A sense of helplessness that affects about every tenth of respondents is more likely to describe respondents who belong to a group or respondents that feel a higher level of concern. Lower perceptions of the risk of illness form a positive link to the belief that COVID-19 news is false, the unconcerned group is much more likely than others to feel indifference toward the pandemic news. The analysis of the attitude towards the news shows the emotional impact and leads to the conclusion that part of respondents considers the investment of their time and energy in the news consumption as unnecessary, worthless, because the benefits are small.

It can be assumed that fatigue of COVID-19 news is caused by the quantity of news, uniformity, repetition, whereas insecurity, hopelessness, depression is caused by the content of the news, daily statistics of the sick and the dead, scary information about the state of the economy and healthcare system. At the same time, people may avoid the news for other reasons, for instance, desire to maintain mental well-being (de Bruin et al., 2021) and news fatigue may not be the main determining factors of news avoidance.

The data from our study contribute to the analysis of second-order media effects (Igartua et al., 2020) because they explain how media consumption affects attitudes towards media content. We go even further to understand the factors of media consumption activity and passivity in the context of news fatigue and news avoidance over long lasting crisis. At the beginning of the pandemic, the analysis of communication use (Igartua et al., 2020) found that high information consumption about coronavirus increases perceived knowledge on the subject and promotes adaptation to preventive measures.

Our study analyses the attitude toward news about COVID-19 in the middle of a pandemic, we find that the use of information is influenced by growing news fatigue. We can conclude that news fatigue is associated with a more passive use of pandemic news (lack of motivation to follow the latest information and discuss it with others). News fatigue, on the other hand, can lead to news avoidance, but avoidance could be interpreted as an expression of news usage activity, as avoidance refers to the selection of news or information sources. The findings of our study can be linked to data from recent studies (Dhanani & Franz, 2020; Ferreira & Borges, 2020), which show that the greater exposure to news is beneficial as it improves citizens' awareness of important issues. The active users will benefit more from choosing the information available (Ferreira & Borges, 2020), while those who are particularly exposed to the news choices of other users, for instance, on social media, will improve their knowledge of the issue at a lower level.

People who do not actively search for news due to lack of interest and low motivation have more passive exposure with news. Passivity has consequences in terms of the perception of news. Active news consumption increases trust in important social institutions such as government institutions and professional media and reduces cynicism (Ferreira & Borges, 2020), and vice versa, passive attitudes towards news reduce trust and increase cynicism.

Although the use of news is important in the perception of the risk of the disease and improvement of knowledge about severity of illness (Igartua et al., 2020), researchers have made conflicting conclusions. According to Mora-Rodríguez and Melero-López (2021), people who are more exposed to pandemic news may not be able to assess the veracity of information, thus, active following of pandemic news does not provide immunity to the effects of disinformation and false news. The data of our study also show that the activity of pandemic news consumption may change over time, on the other hand, the activity may also manifest itself as deliberate avoidance of news. These findings lead to a new interpretation of the understanding of media use and media consumption activity and passivity elements.

Depending on the attitude towards news, contradictory conclusions were drawn regarding the information gap between different groups of news users. Interested and active following to the latest news is associated with an increase in knowledge, while a lack of interest linked with a passive exposure with the news (Ferreira & Borges, 2020) widened the information gap. On the other hand, the increase in the news consumption and professional media in crisis situations reduced the information gap (Casero-Ripollés, 2021), at least at the beginning of the pandemic.

Compared to other studies, in Latvia there is a higher level of news avoidance in general. British researchers (Fletcher et al., 2020) believe that 20% to 25% is a high rate of avoidance and is increasing during the development of the pandemic, from 12% to 22% in the UK between April and July 2020.

Fatigue from the COVID-19 news is growing throughout the pandemic. Data from secondary studies show the proportion of respondents who indicated that they are tired of the news had increased during pandemic (at the beginning of January 2020, 37% 'fully agree' that they feel tired from the news about COVID-19, while at the end of February 2021 it was admitted by 49% (SKDS/State Chancellery, 2021). This means that news fatigue which is changing over time seems to accumulate and increase during the long period of a pandemic crisis (de Bruin et al., 2021).

Such a high level of fatigue and avoidance of news has serious implications. It means that a part of the public may not receive significant information on pandemic. Data shows that higher fatigue levels and low disease risk assessments increase indifference to news, a sense of powerlessness. This factor may increase the desire to avoid COVID-19 news.

The avoidance of news and mistrust in news channels or providers can constitute 'informative inequalities' (Fletcher et al., 2020), namely groups forming in society, whose representatives are not reached by the news on important issues, so the members of the groups cannot adequately assess the risks and protect themselves. Uninformed representatives of the public who do not adequately assess the risk of disease also threaten other people and public health.

Limitations of the Study

The study has some limitation. First, we did not include data on the content of COVID-19 news (e.g., supply dimension) and we have not provided detailed communication use (Igartua et al., 2020) analysis), which could add more factors to understand the sources of news fatigue and the avoidance of news. Second, this study does not employ the question of how respondents perceived the need to follow the news, because it is not only dislike, fatigue, or overload that can cause avoidance of news, but also the belief contrary to normative views that, in a news-rich environment, it is not necessary to follow the news deliberately because 'news find me' (de Zúñiga & Diehl, 2019). Third, we found a correlation between attitudes toward pandemic news and perception of disease risk, but this result does not provide a clear understanding of the causal relationship of news fatigue and news avoidance. Given the constraints of the pandemic, the method used was the Internet survey, it should be considered that people who do not actively use the Internet were not surveyed. These limitations highlight further directions of research.

REFERENCES

Aharoni, T., Kligler-Vilenchik, N., Tenenboim-Weinblatt, K. (2021). 'Be less of a slave to the news': A texto-material perspective on news avoidance among Young adults. *Journalism Studies, 22*(1), 42-59. https://doi.org/10.1080/1461670X.2020.1852885

Anderson, M., & Quinn, D. (2019, August 8). 46% of U.S. social media users say they are 'worn out' by political posts and discussions. *Pew Research Center*. https://www.pewresearch.org/fact-tank/2019/08/08/46-of-u-s-social-media-users-say-they-are-worn-out-by-political-posts-and-discussions/

Bawden, D., & Robinson, L. (2009). The dark side of information: Overload, anxiety and other paradoxes and pathologies. *Journal of Information Science, 35*(2), 180-191. https://doi.org/10.1177/0165551508095781

Becker, M. H., Radius, S. M., & Rosenstock, I. M. (1978). Compliance with a medical regimen for asthma: A test of the health belief model. *Public Health Reports, 93*(3), 268-277. https://doi.org/10.1177/109019818401100101

Brewer, N. T., Chapman, G. B., Gibbons, F. X., Gerrard, M., McCaul, K. D., & Weinstein, N. D. (2007). Meta–analysis of the relationship between risk perception and health behavior: The example of vaccination. *Health Psychology, 26*(2),136-145. https://doi.org/10.1037/0278–6133.26.2.136

Brewer, N. T., Weinstein, N. D., Cuite, C. L., & Herrington, J. E. (2004). Risk perceptions and their relation to risk behaviour. *Annals of Behavioural Medicine, 27*(2), 125-130. https://doi.org/10.1207/s15324796abm2702_7

Bright, L. F., Kleiser, S. B., & Grau, S. L. (2015). Too much Facebook? An exploratory examination of social media fatigue. *Computers in Human Behavior, 44*, 148-155. https://doi.org/10.1016/j.chb.2014.11.048

Casero-Ripollés, A. (2020). Impact of COVID-19 on the media system. Communicative and democratic consequences of news consumption during the outbreak. *Profesional de la Información* [*Information Professional*], *29*(2), e290223. https://doi.org/10.3145/epi.2020.mar.23

Casero-Ripollés, A. (2021). The impact of COVID-19 on journalism: A set of transformations in five domains. *Comunicação e Sociedade* [*Communication and Society*], *40*, 53-69. https://doi.org/10.17231/comsoc.40(2021).3283

COVID-19 Barometer. (2020, April 1). *KANTAR COVID-19 barometrs*. https://www.kantar.lv/kantar-covid-19-barometrs/

Crook, B., Stephens, K. K., Pastorek, A. E., Mackert, M., & Donovan, E. E. (2016). Sharing health information and influencing behavioural intentions: The role of health literacy, information overload, and the Internet in the diffusion of healthy heart information. *Health Communication, 31*(1), 60-71. https://doi.org/10.1080/10410236.2014.936336

de Bruin K., de Haan, Y., Vliegenthart, R., Kruikemeier, S., & Boukes, M. (2021). News avoidance during the COVID-19 crisis: Understanding information overload. *Digital Journalism, 9*(9), 1286-1302. https://doi.org/10.1080/21670811.2021.1957967

de Bruin, W. B., & Bennett, D. (2020). Relationships between Initial COVID-19 risk perceptions and protective health behaviours: A national survey. *American Journal of Preventive Medicine, 59*(2), 157-167. https://doi.org/10.1016/j.amepre.2020.05.001

de Zúñiga, H. G., & Diehl, T. (2019). News finds me perception and democracy: Effects on political knowledge, political interest, and voting. *New Media & Society, 21*(6), 1253-1271. https://doi.org/10.1177/1461444818817548

Deuze, M. (2020). The role of media and mass communication theory in the global pandemic. *Communication Today*, *11(2)*, 4-16.

Dhanani, L. Y., Franz, B. (2020). The role of news consumption and trust in public health leadership in shaping COVID-19 knowledge and prejudice. *Frontiers in Psychology, 11*, 560828. https://doi.org/10.3389/fpsyg.2020.560828

Edgerly, S., Vraga, E. K., Bode, L., Thorson, K., & Thorson, E. (2018). New media, new relationship to participation? A closer look at youth news repertoires and political participation. *Journalism & Mass Communication Quarterly, 95*(1), 192-212. https://doi.org/10.1177/1077699017706928

Eppler, M. J., & Mengis, J. (2004). The concept of information overload: A review of literature from organization science, accounting, marketing, MIS, and related disciplines. *Information Society, 20*(5)*, 325-344. https://doi.org/10.1080/01972240490507974

Farhoomand, A. F., & Drury, D. H. (2002). Managerial information overload. *Communications of the ACM, 45*(10), 127-131. https://doi.org/10.1145/570907.570909

Fedeli, S., & Matsa, K. E. (2018, July 17). Use of mobile devices for news continues to grow, outpacing desktops and laptops. *Pew Research Center*. https://www.benton.org/headlines/use-mobile-devices-news-continues-grow-outpacing-desktops-and-laptops

Ferreira, G. B., & Borges, S. (2020). Media and misinformation in times of COVID-19: How people informed themselves in the days following the Portuguese Declaration of the State of Emergency. *Journalism and Media,* 1(1),108-121. https://doi.org/10.3390/journalmedia1010008

Fischer, P., Schulz-Hardt, S., & Frey, D. (2008). Selective exposure and information quantity: How different information quantities moderate decision makers' preference for consistent and inconsistent information. *Journal of Personality and Social Psychology, 94*(2), 231-244. https://doi.org/10.1037/0022-3514.94.2.94.2.231

Fletcher, R., Kalogeropoulos, A., & Nielsen, R. K. (2020, July 28). News avoidance in the UK remains high as lockdown restrictions are eased. *Reuters Institute for the Study of Journalism*. https://reutersinstitute.politics.ox.ac.uk/news-avoidance-uk-remains-high-lockdown-restrictions-are-eased

Frissen, T., De Coninck, D., Matthys, K., & d'Haenens, L. (2020). Longitudinal evidence of how media audiences differ in public health perceptions and behaviours during a global pandemic. *Public Health, 8*, 583408. https://doi.org/10.3389/fpubh.2020.583408

Gottfried, J. (2016, July 14). Most Americans already feel election coverage fatigue. *Pew Research Center*. https://www.pewresearch.org/fact-tank/2016/07/14/most-americans-already-feel-election-coverage-fatigue/

Gottfried, J. (2020, February 26). Americans' news fatigue isn't going away–about two thirds still feel worn out. *Pew Research Center*. https://www.pewresearch.org/fact-tank/2020/02/26/almost-seven-in-ten-americans-have-news-fatigue-more-among-republicans/

Gottfried, J., & Barthel, M. (2018, June 5). Almost seven-in-ten Americans have news fatigue, more among Republicans. Pew Research Center. http://www.pewresearch.org/fact-tank/2018/06/05/almost-seven-in-ten-americans-have-news-fatigue-more-among-republicans/

Holton, A. E., & Chyi, H. I. (2012). News and the overloaded consumer: Factors influencing information overload among news consumers. *Cyberpsychology, Behavior and Social Networking, 15*(11), 619-624. https://doi.org/10.1089/cyber.2011.0610

Hua, J. N., & Howell, J. L. (2020). Coping self-efficacy influences health information avoidance. *Journal of Health Psychology, 27*(3). https://doi.org/10.1177/1359105320965664

Igartua, J. J., Ortega-Mohedano, F., & Arcila-Calderón, C. (2020). Communication use in the times of the coronavirus. A cross-cultural study. *El Profesional de la Información* [*The Information Professional*], *29*(3), e290318. https://doi.org/10.3145/epi.2020.may.18

Islam, A. K. M., Whelan, E., & Brooks, S. (2018, August 16-18). *Social media overload and fatigue: The moderating role of multitasking computer self-efficacy* [Paper presentation]. The 24th American Conference on Information Systems, New Orleans, LA, USA.

Janssen, R., & de Poot, H. (2006). Information overload: Why some people seem to suffer more than others. In *Proceedings of the 4th Nordic Conference on Human-Computer Interaction 2006* (pp. 397-400). https://doi.org/10.1145/1182475.1182521

Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York University Press.

Jurkowitz, M. (2020, May 22). Americans are following news about presidential candidates much less closely than COVID-19 news. *Pew Research Center*. https://www.pewresearch.org/fact-tank/2020/05/22/americans-are-following-news-about-presidential-candidates-much-less-closely-than-covid-19-news/

Karlsen, R., Beyer, A., & Steen-Johnsen, K. (2020). Do high-choice media environments facilitate news avoidance? A longitudinal study 1997-2016. *Journal of Broadcasting & Electronic Media*, 64(5), 794-814. https://doi.org/10.1080/08838151.2020.1835428

Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Utilization of mass communication by the individual. In J. G. Blumler, & E. Katz (Eds.), *The uses of mass communications: Current perspectives on gratifications research* (pp. 19-31). SAGE.

Kramp, L., Carpenter, N., Hepp, A., Kunelious, R., Nieminen, H., Olsson, T., Pruulman-Vengerfeldt, P., Trivundža, I. T., Tosoni, S. (Eds). (2016). *Politics, civil society and participation: Media and communication in transforming environment*. The University of Bremen, the European Communication Research and Education Association, and the Slovene Communication Association.

Lee, S. W. S., Schwarz, N., Taubman, D., & Hou, M. (2010). Sneezing in times of a flu pandemic: Public sneezing increases perception of unrelated risks and shifts preferences for federal spending. *Psychological Science*, *21*(3), 375-377. https://doi.org/10.1177/0956797609359876

Levy, M. R., & Windhal, S. (1984). Audience activity and gratification. *Communication Research, 11*(1), 51-78. https://doi.org/10.1177/009365084011001003

Mārtinsone, K., & Sudraba V. (2016). *Veselības psiholoģija* [*Health psychology*]. RSU.

McQuail, D. (2010). *McQuail's mass communication theory*. SAGE.

McQuail, D., & Deuze, M. (2020). *McQuails' media and mass communication theory*. SAGE.

Misra, S., & Stokols, D. (2012). Psychological and health outcomes of perceived information overload. *Environment and Behavior, 44*(6), 737-759. https://doi.org/10.1177/0013916511404408

Mora-Rodríguez, A., & Melero-López, I. (2021). News consumption and risk perception of COVID-19 in Spain. *Comunicar* [*To communicate*]*, 29*(66), 71-81. https://doi.org/10.3916/C66-2021-06

NEPLP. (2017, December). *Radio patēriņš dažādās platformās un attīstības prognozes* [*The consumption of the radio consumption on the different platforms and forecasts of the development*]. https://www.neplpadome. lv/lv/assets/documents/Petijumi/4946_KantarTNS_NEPLP_Radio_PREZENTACIJA_11.01.2017.pdf

NEPLP. (2018, July 28). *Pētījums par Latvijas iedzīvotāju interesēm, dienaskārtību un uzticēšanos medijiem* [*The Study on the interests of Latvian population, agenda and trust the media*]. https://www.neplpadome.lv/ lv/assets/documents/Petijumi/Mediju_lieto%C5%A1ana_atskaite_08.2018_%20(002).pdf

NEPLP. (2020, October). *Pētījums par Latvijas iedzīvotāju mediju satura lietošanas paradumiem un sabiedrības vajadzībām* [*The study of the media content use habits of the Latvian population and the needs of the society*]. https://www.neplpadome.lv/lv/sakums/academia/petijumi.html

Newman, N., Fletcher, R., Kalogeropoulos, A., Levy, D. A. L., & Nielsen, R. K. (2017). Reuters Institute digital news report 2017. *Reuters Institute for the Study of Journalism*. https://reutersinstitute.politics.ox.ac.uk/ sites/default/files/Digital%20News%20Report%202017%20web_0.pdf

Newman, N., R. Fletcher, A. Schulz, Andi, S., & Nielsen, R. K. (2020). Reuters Institute digital news report (2020). *Reuters Institute for the Study of Journalism*. https://reutersinstitute.politics.ox.ac.uk/sites/ default/files/Digital%20News%20Report%202017%20%20web_0.pdf

Orom, H., Biddle, C., Waters, E. A., Kiviniemi, M. T., Sosnowski, A. N., & Hay, J. L. (2020). Causes and consequences of uncertainty about illness risk perceptions. *Journal of Health Psychology, 25*(8), 1030-1042. https://doi.org/10.1177/1359105317745966

Palmer, R., & Toff, B. (2019). From news fatigue to news avoidance. N*iemanLab*. https://www.niemanlab.org/ 2018/12/from-news-fatigue-to-news-avoidance/

Park, C. S. (2019). Does too much news on social media discourage news seeking? Mediating role of news efficacy between perceived news overload and news avoidance on social media. *Social Media + Society, 5(3)*, 1-12. https://doi.org/10.1177/2056305119872956

Pentina, I., & Tarafdar, M. (2014). From "information" to "knowing": Exploring the role of social media in contemporary news consumption. *Computers in Human Behavior, 35*, 211-223. https://doi.org/10.1016/j.chb.2014.02.045

Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. *Advances in Experimental Social Psychology, 19,* 123-205. https://doi.org/10.1016/S0065-2601(08)60214-2

Powell, T. E., Hameleers, M., & van der Meer, T. G. L. A. (2021). Selection in a snapshot? The contribution of visuals to the selection and avoidance of political news in information-rich media settings. *The International Journal of Press/Politics, 26*(1), 46-68. https://doi.org/10.1177/1940161220966730

Rosenstock, I. M. (1974). Historical origins of the health belief model. *Health Education Monographs, 2*(4), 328-335. https://doi.org/10.1177/109019817400200405

Rubin, A. M. (1993). Audience activity and media use. *Communication Monographs*, *60*(1), 98-105. https://doi.org/10.100/03637759309376300

Ruggiero, T. E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication & Society*, *3*(1), 3-37. https://doi.org/10.1207/S15327825MCS0301_02

Sarwar, F., Panatik, S. A., & Jameel, H. T. (2020). Understanding public's adoption of preventive behavior during COVID-19 pandemic using health belief model: Role of appraisals and psychological capital. https://doi.org/10.31124/advance.12661178.v1

Savolainen, R. (2007). Filtering and withdrawing: Strategies for coping with information overload in everyday contexts. *Journal of Information Science, 33*(5)*,* 611-621. https://doi.org/10.1177/0165551506077418

Severin, W. J. (2000). *Communication theories: Origins, methods, and uses in the mass media*. Addison Wesley.

Shearer, E. (2018, December 10). Social media outpaces print newspapers in the U.S. as a news source. *Pew Research Center*. https://www.pewresearch.org/fact-tank/2018/12/10/social-media-outpaces-print-newspapers-in- the-u-s-as-a-news-source/

Shearer, E., & Gottfried, J. (2017, September 7). News use across social media platforms 2017. *Pew Research Center*. http://www.journalism.org/2017/09/07/news-use-across- social-media-platforms-2017/

Siaki, L. A., & Loescher, L. J. (2011). Pacific Islanders' perceived risk of cardiovascular disease and diabetes. *Journal of Transcultural Nursing, 22*(2), 191-200. https://doi.org/10.1177/1043659610395763

SKDS/State Chancellery. (2021). *Pētījums par sabiedrības attieksmi pret COVID-19. Latvijas iedzīvotāju aptauja* [*Public attitudes towards COVID-19. Survey of Latvian residents*]. http://petijumi.mk.gov.lv/sites/default/files/title_file/SKDS_Feb2021.pdf

Song, H., Jung, J., & Kim, Y. (2017). Perceived news overload and its cognitive and attitudinal consequences for news usage in South Korea. *Journalism & Mass Communication Quarterly, 94*(4), 1172-1190. https://doi.org/10.1177/1077699016679975

Sweeny, K., Melnyk, D., Miller, W., & Shepperd, J. A. (2010). Information avoidance: Who, what, when, and why. *Review of General Psychology, 14*(4), 340-353. https://doi.org/10.1037/a0021288

Van den Bulck, J. (2006). Television news avoidance: Exploratory results from a one-year follow-up study. *Journal of Broadcasting & Electronic Media, 50*(2), 231-252. https://doi.org/10.1207/s15506878jobem5002_4

van der Weijden, T., van Steenkiste, B., Stoffers, H. E., Timmermans, D. R., & Grol, R. (2007). Primary prevention of cardiovascular diseases in general practice: Mismatch between cardiovascular risk and patients' risk perceptions. *Medical Decision Making, 27*(6), 754-761. https://doi.org/10.1177/0272989X07305323

Villi, M., Aharoni, T., Tenenboim-Weinblatt, K., Boczkowski, P. J., Hayashi, K., Mitchelstein, E., Tanaka, A., & Kligler-Vilenchik, N. (2021). Taking a break from news: A five-nation study of news avoidance in the digital era. Digital Journalism,10(1), 148-164. https://doi.org/10.1080/21670811.2021.1904266

Wilson, T. D. (1999). Exploring models of information behaviour: The 'uncertainty' project. *Information Processing and Management, 35*(6), 839-849. https://doi.org/10.1108/EUM0000000007145

Woodstock, L. (2014). The news-democracy narrative and the unexpected benefits of limited news consumption: The case of news resisters. *Journalism, 15*(7), 834-849. https://doi.org/10.1177/1464884913504260

Yang, Z. J., & Kahlor, L. (2013). What, me worry? The role of affect in information seeking and avoidance. *Science Communication, 35*(2), 189-212. https://doi.org/10.1177/1075547012441873

Yaniv, I., Benador, D., & Sagi, M. (2004). On not wanting to know and not wanting to inform others: Choices regarding predictive genetic testing. *Risk, Decision & Policy, 9*(4), 317-336. https://doi.org/10.1080/14664530490896573

York, C. (2013). Overloaded by the news: Effects of news exposure and enjoyment on reporting information overload. *Communication Research Reports, 30*(4), 282-292. https://doi.org/10.1080/08824096.2013.836628

York, C., & Turcotte, J. (2015). Vacationing from Facebook: Adoption, temporary discontinuance, and readoption of an innovation. *Communication Research Reports, 32*(1), 54-62. https://doi.org/10.1080/08824096.2014.989975

Zalc, J., & Maillard, R. (2020). Uncertainty/EU/hope. Public opinion in times of COVID-19. *European Parliament*. https://www.europarl.europa.eu/at-your-service/files/beheard/eurobarometer/2020/public_opinion_in_the_eu_in_time_of_coronavirus_crisis/report/en-covid19-survey-report.pdf

APPENDIX A

Table A. Structure of perceived risk perception for individual, family, and society (N=1,005)

	For yourself	For your family, relatives	For society in general
Low and almost unreal	14%	11%	7%
Low but realistic	46%	41%	36%
Medium-high and realistic	22%	29%	35%
High and realistic	9%	10%	11%
Very high and very real	3%	3%	2%
Difficult to say	6%	7%	9%