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# MEDIA DEPENDENCY IN A MULTIPLE CRISIS: INFORMATION SEEKING AND MEDIA TRUST AFTER AN EARTHQUAKE DURING THE COVID-19 PANDEMIC

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The paper examines the relationship between trust in media and information seeking from the media dependency theory perspective. Its purpose is to explore different goals in media use during crisis, and the role of trust and perception of misinformation. Research was done in Croatia in spring 2020, when citizens were experiencing a crisis caused by the Covid-19 pandemic and an earthquake hitting the capital city of Zagreb. It is based on an online survey on a convenience sample ( $N = 741$ ). Three media use goals were discovered: social understanding, self-understanding, and the play&communication goal. Education, age, and gender were proven to be important in predicting media use during a crisis. Media trust is correlated to social understanding goals and traditional media use, while the perception of being vulnerable to misinformation is correlated to withdrawal from media use.

Keywords: media dependency, media use, media trust, crisis, Covid-19



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## INTRODUCTION

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The disruption of the current economic, political, and everyday life practices by the Covid-19 pandemic have been so far discussed at length from different perspectives and academic disciplines. Media and communication scholars studied the change in news consumption (Mihelj et al., 2022; Van Aelst et al., 2021), spread and the effects of misinformation (popularly labelled as *infodemic*), or evaluated the effectiveness of health communication and the media effects on mental health (Garfin et al., 2020). It is known that crisis events create a quantitative rise in media consumption as audiences seek information to orient themselves in the new and unpredictable environment. This phenomenon has been explained by media dependency theory (MDT), which analyses what goals of audiences are met by information produced in the media system (Ball-Rokeach & DeFleur, 1976; Ball-Rokeach, 1985).

However, media systems have profoundly changed since MDT was proposed in the 1970s. Traditional, professional news organisations had a privileged position as gatekeepers of information by various social institutions and served as a main communication channel between these institutions and citizens. Contemporary media environments are labelled as high-choice environments, where higher proliferation of information sources in different legacy, digital and social media makes audiences fragmented and less reliant on professional news organisations (Van Aelst et al., 2017). This allows audiences to seek information not only from professional news organisations, but also from their social networks and various alternative sources. Moreover, what has changed profoundly is the declining level of trust, not only in professional media organisations and journalism, but in social institutions and expert systems in general. Although MDT was proposed when traditional media dominated, many authors showed that the principles of the theory still hold in the high-choice media environments (see Jakob, 2010). This will be another opportunity to test the theory in the more complex multi-media environment and reveal in which way media serve audiences to achieve different social goals, as active media users who are able to select and interact with different information sources (Livingstone, 2003).

The goal of this paper is to explore how audiences navigated their high choice information environment in the multiple crisis – one caused by the Covid-19 pandemic and another one by an earthquake. In March 2020, the capital city of Zagreb was hit by a stronger earthquake. People were caught in a highly stressful situation in which they were exposed to at

that time a new virus, while on the other hand, being exposed to an earthquake added a completely different type of stress and existential threat. How did audiences use media to meet their needs, what role did trust in media and misinformation have in this setting and what were the effects of media use on well-being?

## **MEDIA DEPENDENCY THEORY**

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The theory of media dependency explains the links between production of information in the media system, and individual uses of media audiences. Media dependency is defined as "a relationship in which the capacity of individuals to attain their goals is contingent upon the information sources of the media system" (Ball-Rokeach, 1985, p. 487). The macro dimension of MDT refers to the characteristics of the media system, while the micro dimension does to individual media use. Although there are ever expanding sources of information in contemporary societies, media audiences still depend a great deal on media organisations for acquiring information and knowledge about the world and current events. According to Ball-Rokeach (1985), media have specific social functions, and audiences are more dependent on them if there are less functional alternatives in their interpersonal relationships or in other spheres of social life. During lockdowns and measures of distance due to the Covid-19 crisis, even more spheres of social life became dependent on the media system. In fact, media consumption in 2020 increased up to around 60% globally in watching videos (Nielsen, 2020), and online and social media use skyrocketed as well (Newman et al., 2020). Media technology and platforms were used for information, interpersonal communication, education, work, shopping, entertainment, and leisure activities in home confinement.

Ball-Rokeach (1985) delineates three major goals which define individual media use. The goal of understanding is oriented either towards the social world (understanding and learning about social world or community) and self (learning about self). The goal of orientation refers to getting information for specific tasks and behaviour: action orientation refers to gaining information for decision making and practical actions in everyday life, while interaction orientation refers to getting information on how to behave or talk to other people in various situations (e.g., how to behave on a job interview). The goal of play refers to escapism, entertainment or relaxation, which can be either social or solitary.

The levels of media dependency depend on the nature of the media and social system and personal characteristics of

media audiences. Media dependency is higher in societies which are less plural, and where there are fewer sources among which audiences could choose (Jackob, 2010, p. 590). Media dependency is not the same as media use, but they are positively correlated, as familiarity with the media makes audiences more likely to be dependent on them for their information goals (Lowery, 2004).

## **MEDIA DEPENDENCY AND MEDIA USE DURING CRISIS**

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Individual media dependencies rely on the characteristics of the social environment – if it is ambiguous or threatening, audiences will rely on media to ease the discomfort and feel more efficacious in making decisions (Ball-Rokeach, 1985, p. 500). Therefore, audiences will depend more on media in the moments of social change, disruption, conflict, or crisis, which makes the previous schemes of understanding social reality less useful for survival or safety (Ball-Rokeach & DeFleur, 1976; Ball-Rokeach, 1985). However, although media dependency is higher during crisis for all social groups, it still differs among audiences of different socio-demographic categories (Lowrey, 2004). For example, educated audiences rely less on mainstream media (Lowrey, 2004), seek information from a wider repertoire of sources (Sommerfeldt, 2015), and there are also gender differences in information seeking during crisis (Lachlan et al., 2009, 2010).

Media dependency was thus analysed in the context of war (Melki & Kozman, 2021), terrorist and other attacks (Jin et al., 2016; Lachlan et al., 2009; Lowrey, 2004; Mazer et al., 2015), health crises (Hu & Zhang, 2014; Jang & Baek, 2019; Lyu, 2012), natural catastrophes like earthquakes, floods or hurricanes (Jung & Moro, 2014; Seo et al., 2012), or industrial or man-made catastrophes (Lachlan et al., 2010). Various studies found that mass media were more important sources of information for audiences during crisis and disruptive events, although interpersonal communication was also highly important in the information spread (Lowery, 2004, p. 341). During the H1N1 flu crisis, mass media, especially television were more significant in the first phase of the outbreak, while interpersonal communication, online media and alternative sources were used more in later phases (Hu & Zhang, 2014). Television also contributed the most to knowledge acquisition about the health crisis (Hu & Zhang, 2014).

The need for information during crisis might be different depending on the type of crisis. Amid fast evolving natural catastrophes audiences seek immediate information, while during more slowly evolving, e.g. economic crises, they might need news which help them have a deeper understanding of

the process (Westlund & Ghersetti, 2015 in Van Aelst et al., 2021).

Research following the Sichuan earthquake showed that television and internet use positively influenced the perceived gains of social-relational resources, and that internet also positively influenced social trust (Seo et al., 2012). On the other hand, television had a negative effect in increasing perceived stress (Seo et al., 2012). The willingness to help the victims partly depends on media coverage, as perceived gains of social-relational resources and social trust motivated altruistic behaviour, while higher perceived stress motivated self-interest behaviour and avoidance of negative stimulus (Seo et al., 2012).

The severity and scale of a crisis is sometimes less important for media dependency than the way the crisis is perceived. Although MDT suggests that higher instability predicts higher dependency on media, research on media use in war zones and refugee environment shows that there is an ambiguity in the way instability and threat is perceived – for example, people left in war zones felt less threatened and had lower media dependency than those displaced in refugee camps (Melki & Kozman, 2021). Various factors could determine the perception of a threat, like the proximity to the problem or personal involvement. Moreover, people can become desensitised to threat with time (Melki & Kozman, 2021). Higher perception of threat was shown to be more connected to dependency on interpersonal communication than on mass media (Lowery, 2004). This is understandable, as people in crisis are drawn to each other more, and this is predicted more by the perception of threat than by the scale of the crisis (Lowery, 2004, p. 354).

Higher media use during a crisis event could add to the psychological distress as audiences are increasingly exposed to information about the collective trauma they are experiencing, which was shown to be the case in the Covid-19 pandemic (Chao et al., 2020; Garfin et al., 2020). However, media was also utilised for attaining goals, replacing different activities and social functions which were impossible to be attained without media during lockdown, and positive coping with stress. This, on the other hand, had various health and well-being benefits (Chao et al., 2020). Information seeking and sharing are also important coping strategies used for alleviating stress during a crisis event, as acquiring information reduces uncertainty (Jin et al., 2016; Lachlan et al., 2009). However, higher use and dependency on media during crisis can also have negative effects on mental health and may add to post-traumatic stress disorder (Garfin et al., 2020; Lachlan et al., 2009).

## **MEDIA DEPENDENCY AND TRUST**

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Trust in news media is in decline, due to the rise of different information sources, attacks on the credibility of traditional news media from politicians and alternative media, a higher amount of misinformation and greater amount of audience selectivity in media use (Strömbäck et al., 2020). Trust in media is one of the most important factors which determine media use, especially in the period of higher possibilities of audience selectivity. It mitigates audience choices depending on the type of media they will use. Audiences who feel less dependent on mainstream media and who have less media trust tend to seek out alternative or non-media sources of information to fulfil their information needs (Jackob, 2010). The other way around also holds – audiences that use the mainstream news media less tend to trust these media sources less (Strömbäck et al., 2020).

The relationship between trust in the news media was proven to be important during a health crisis. When there was a lack of trust in public officials, audiences turned to online media, social media and interpersonal communication (Jang & Baek, 2019; Tai & Sun, 2007). In the aftermath of the Great East Japan Earthquake in 2011, the ambiguity of reporting and lack of trust in mainstream media coverage provoked higher reliance on social media, which had a function for interpersonal communication, as a channel for organisations, media and local governments, and information sharing (Jung & Moro, 2014).

It has been shown that misinformation can affect media use and trust in general. In analysing the effects of exposure to fake news during the 2006 Israeli election campaign, the result was that fake-news-perceived realism can stimulate feelings of inefficacy, alienation, and cynicism (Balmas, 2012). The perceived realism of fake news was strongest within individuals who were more exposed to fake news and less exposed to hard news (Balmas, 2012). Rumours and misinformation often appear during crisis events (Mazer et al., 2015), and were also vastly spread via social media during the Swine flu, Ebola and Zika virus epidemics, as well as during the Covid-19 pandemic (Mihelj et al., 2022).

Trust in media and journalism in Croatia is traditionally rather low and below several other social institutions (Čuvalo, 2013). While in the early 2010s internet was the most trusted media platform for Croatian audiences (Čuvalo, 2013), recent data on media trust demonstrates that traditional media are among the most trusted (e.g. private television channels, see Vozab & Peruško, 2021). While a rise in media trust was noted during the Covid-19 pandemic, paradoxically, there was also a rise of concern over misinformation in Croatia (Vozab & Peruško, 2021).

## **MEDIA USE AND TRUST DURING THE COVID-19 PANDEMIC**

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The Covid-19 crisis greatly influenced modes of media and news consumption. Media and news consumption and trust in media rose, especially television and online news, and audiences also relied highly on social media and instant messaging, while newspaper consumption dropped (Newman et al., 2020; Van Aelst et al., 2021). Several studies suggest that television had an especially important role during the Covid-19 pandemic as government announcements were broadcast as "media events" (Mihelj et al., 2022; Newman et al., 2021). This was also the case in Croatia, as the Crisis Headquarters of the Ministry of Health held daily press conferences. Audiences were more dependent on media and shared that they used media for understanding the new situation and for deciding on their actions (Newman et al., 2020).

Digital News Report shows that 54% of global audiences perceived to have been exposed to misinformation about Covid-19 (Newman et al., 2021). Research during the second wave of the pandemic in the UK found "infodemically vulnerable" groups with low trust in media, who avoid news, and who are more exposed to misinformation (Nielsen et al., 2020). This inequality in information consumption is predicted by age, gender, education, and income (Nielsen et al., 2020). Although media trust declined, and news avoidance increased after that initial period of upsurge in media consumption (Newman et al., 2020), overall media trust significantly rose globally during different waves of the Covid-19 pandemic (Newman et al., 2021).

## **CONTEXT OF THE STUDY AND RESEARCH QUESTIONS**

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On March 5th 2020 the Croatian Government declared a state of emergency due to the Covid-19 epidemic (Croatian Government, 2020). Series of measures and recommendations for citizens were introduced, like the obligation of quarantine for travellers, closure of public institutions, closure of bars and restaurants and other places of social gathering. The campaign #stayathome (#ostanidoma) was in full swing and citizens were advised to work at home and keep physical distancing. At that time, the capital city of Zagreb was hit by an earthquake of magnitude 5.5 on the Richter scale in the morning of March 22nd. This earthquake was followed by a series of aftershock waves. It left many people homeless and created serious damage to the city infrastructure.

This study tried to capture the individual media dependencies on media during the double crisis: the one caused by the Covid-19 pandemic and the one caused by an earthquake. Based on the media dependency theoretical framework, the following research questions are posed:

- RQ1: What goals guided audiences in their media use?  
RQ2: What socio-demographic characteristics determined media use and goals?  
RQ3: What is the relationship between media use goals and different media types?  
RQ4: What is the relationship between trust in media and media use?  
RQ5: What is the relationship between the perception of threat and goals of media use?

## METHODOLOGY, DATA, AND SAMPLE

The study was conducted as part of a research project within a graduate course on the journalism study programme at the Faculty of Political Science, University of Zagreb, at which a cross-sectional survey and questionnaire were designed. An online survey was shared from 7th to 25th April 2020. The survey was shared via snowball method, through social media and e-mail. The analysis is based on a convenience sample of 741 respondents. The convenience sample is clearly skewed in favour of certain socio-demographic categories (see Table 1). It is over-represented by female respondents (77.6%), the youngest age group (59.1%), students (46.4%) and citizens who were mostly isolated at home due to the Covid-19 measures (86.6%).

TABLE 1  
Socio-demographic characteristics of the sample

		N	%
Gender	Male	163	22
	Female	575	77.6
Age groups	15 to 29	438	59.1
	30 to 44	123	16.6
	45 to 59	117	15.8
	60 and older	47	6.3
Employment status	Full-time employment	276	37.2
	Part-time employment	24	3.2
	Unemployed	42	5.7
	Student (school or university)	344	46.4
	Retired	43	5.8
Size of settlement	Smaller settlement or village	231	31.2
	Smaller town	133	17.9
	Medium sized city	75	10.1
	Suburbs of the big city	44	5.9
	Big city	255	34.4
Earthquake region	Earthquake region (City of Zagreb and Zagreb County)	295	39.8
	Outside of the earthquake region	440	59.4
Isolation	Being isolated at home	642	86.6
	Leaving home for work	95	12.8

## MEASUREMENT AND SCALES

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### Dependent variables

Media use was operationalised with the question "How often did you follow media during the previous month for any purpose (news, entertainment...)?". Respondents were offered different media sources and could mark the frequency of use on a six-point scale: 1 (never), 2 (at least once), 3 (at least once a week), 4 (once a day), 5 (several times a day), 6 (every hour and more often). The variable total media use was constructed as an additive index of all variables which measured frequency of media use (Cronbach  $\alpha = 0.75$ ). An exploratory factor analysis with varimax rotation was used to distinguish different dimensions of media use. It resulted with three dimensions: social media use, online media use and television use. Based on factor analysis, three additive variables were computed.<sup>1</sup> It is important to note that online media based on this factor analysis refer to professional news or expert sources. Another set of dependent variables refers to the media use goals from the MDT. These variables were constructed based on the factor analysis described below in the results section (see Table 2). Based on factor analysis, three indexes were created: social understanding (Cronbach  $\alpha = 0.81$ ), self-understanding (Cronbach  $\alpha = 0.79$ ) and play&communication (Cronbach  $\alpha = 0.83$ ).

### Independent variables

Various *socio-demographic and context measures* were used as independent variables. Age is a simple continuous variable, and gender is a dichotomous variable (1 = female and 2 = male). Due to measures for restriction of movement, a large number of citizens were isolated at home, while a segment of citizens still went to work outside their home. The isolation at home was measured by a dichotomous variable (1 = I was mostly isolated at home, 2 = I had to leave home for work during previous month). Income was measured on a five-point scale (1 = Greatly below average to 5 = Greatly above average). Education is a variable with an eight-point scale: 1 = Unfinished elementary school to 8 = PhD. As we believe that citizens in the region damaged by the earthquake differed from those from other regions, we developed a dichotomous variable with values 1 (City of Zagreb and wider Zagreb County) and 2 (other regions).

Variables referring to *psychological reactions and coping with stress* were also included. Perception of threat is operationalised as a variable computed from different variables (Cronbach  $\alpha = 0.68$ ).<sup>2</sup> Variables referring to coping with stress are taken from the COPE inventory (Carver et al., 1989). Active

coping with stressful situations is operationalised as a variable on a scale from 1 (I never or almost never do this) to 5 (I do this very often), which measures agreement with the statement "I take necessary measures to resolve the problem". Avoidance coping is measured with the same scale that measures agreement with the statement: "I turn to other activities to keep my mind off the problem". Emotional reactions to the crisis were measured by asking participants if they were feeling confused, angry, depressed, scared, sad or nervous.<sup>3</sup> The additive variable was constructed by computing all these emotional reactions (Cronbach's alpha = 0.85).

Another block of independent variables included those measuring *media trust and attitudes towards misinformation*. Trust in all media is a variable on a five-point agreement scale, which measures agreement with the statement "I believe I can trust most of the media". Attitudes towards misinformation were measured with three separate variables using the scale. Respondents could mark their agreement with these statements: "When I think about the news, it is difficult for me to determine what is true information", "I believe I was exposed to fake news in the previous period" and "I always try to check the factuality of news and information".

## ANALYSIS

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For exploring the different types of media use goals, we employed factor analysis. Hierarchical regression analysis was used to explain media dependency, goals in media use and emotional reactions. It was built in three blocks of independent variables. The first block consisted of socio-demographic and contextual variables. The second block consisted of variables referring to *psychological reactions and coping with stress during crisis*. The third block consisted of variables regarding media use, trust, and attitudes towards misinformation. The analysis was performed in software for statistical analysis SPSS. The results are presented in Tables 2, 3 and 4.

## RESULTS

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### Media dependency goals

Factor analysis was carried out to distinguish different goals audiences have in their media use. With Principal Component Analysis as extraction method and Varimax rotation with Kaiser Normalisation, three factors were extracted, which explain together 71% of variance. The first factor is named 'social understanding goal', because it refers to using media for understanding actions of others, current events, making decisions and thinking about the future. It is a mixture of social under-

standing and orientation goals as originally understood by Ball-Rokeach (1985). The second factor is named 'self-understanding goal' because it refers to thinking about one's situation, creating an everyday routine or expressing oneself. The third factor is named 'play&communication goal', as it refers to communication and entertainment with others and relaxation.

TABLE 2  
Three media use goals  
– results of the factor  
analysis

	Social understanding	Self- -understanding	Play& communication
To get information on how to behave towards others	0.846	0.208	
To get information about current events	0.799		0.204
To help me decide what to do in a certain situation	0.796	0.294	
To understand the future consequences of this situation	0.583	0.491	
To think about me after this situation ends	0.198	0.841	0.123
To create an everyday routine in a new situation	0.189	0.801	0.152
To express how I feel		0.729	0.307
To entertain myself with others		0.238	0.854
To relax		0.202	0.846
To communicate with others	0.205		0.813

### Explaining media use – what media were audiences most dependent on

Age is an important predictor of media use. Younger audiences used media in general more frequently, especially social media ( $\beta = -0.5^{***}$ ), while older audiences were more dependent on television. Women used media in general and television more frequently. Education is a significant predictor of total media use, especially online media ( $\beta = 0.15^{**}$ ). Being isolated during lockdown seemed not to have a significant effect on media dependencies. However, there were some differences between regions – audiences affected by an earthquake were more dependent on social media (although the significance is lost when exposure to misinformation is accounted for).

Higher perception of threat drives total media use ( $\beta = 0.1^*$ ), online media ( $\beta = 0.13^{**}$ ) and television ( $\beta = 0.12^{**}$ ), but the significance is lost when other media variables are included. Active coping seems to be more connected to more frequent media use in general ( $\beta = 0.16^{***}$ ), social ( $\beta = 0.1^{**}$ ), and online media use ( $\beta = 0.13^{**}$ ), but the relationship is lost when

TABLE 3  
Results of the  
regression analysis  
predicting media use

	Total media use			Social media use			Online media			Television		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
(Constant)	54.226	41.644	22.652	28.711	23.632	13.648	11.357	6.746	2.166	6.708	3.962	3.105
Age	-0.3***	-0.32***	-0.25***	-0.61***	-0.62***	-0.5***	-0.02	-0.05	-0.05	0.25***	0.22***	0.16***
Gender	-0.11*	-0.08*	-0.06	-0.05	-0.03	0.0	-0.06	-0.04	-0.06	-0.15***	-0.12**	-0.11*
Isolation	-0.04	-0.03	0.03	-0.03	-0.02	0.03	-0.05	-0.05	-0.01	-0.02	0.001	0.014
Income	0.06	0.06	0.03	0.02	0.03	0.01	0.08	0.09	0.06	0.04	0.054	0.039
Education	0.14**	0.12*	0.12**	0.08*	0.06	0.05	0.17***	0.15**	0.15**	0.03	0.02	0.025
Earthquake region	-0.07	-0.06	-0.01	-0.07*	-0.07*	-0.05	-0.04	-0.03	0.03	0.01	0.02	0.05
Perception of threat	0.1*	0.1*	0.06	0.05	0.05	0.04	-0.04	0.13**	0.07	0.12**	0.12**	0.086
Active coping	0.16***	0.16***	0.01	0.1**	0.1**	0.02	0.13**	0.13**	-0.01	0.05	0.05	0.003
Avoidance coping	0.04	0.04	-0.04	0.07	0.07	0.01	-0.03	-0.03	-0.07	0.08	0.08	0.061
Trust in all media	0.05	0.05	0.05	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.18***
Hard to evaluate misinformation	-0.09*	-0.09*	-0.09*	-0.04	-0.04	-0.04	-0.11*	-0.11*	-0.11*	-0.02	-0.02	-0.02
Exposed to misinformation	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	-0.037	-0.037	-0.002
Fact checking practices	0.16***	0.16***	0.16***	0.08*	0.08*	0.08*	0.15***	0.15***	0.15***	0.11*	0.11*	0.01
Social understanding	0.11*	0.11*	0.11*	-0.03	-0.03	-0.03	0.04	0.04	0.04	0.01	0.01	0.01
Self-understanding	0.17***	0.17***	0.17***	0.16***	0.16***	0.16***	0.02	0.02	0.02	0.02	0.02	0.01
Play&communication	0.17***	0.17***	0.17***	0.26***	0.26***	0.26***	0.02	0.02	0.02	0.02	0.02	0.01
R <sup>2</sup>	0.13	0.18	0.33	0.38	0.4	0.51	0.06	0.09	0.22	0.08	0.11	0.16

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

media goals and trust variables are introduced. Avoidance coping is not significantly connected to media use.

Trust in media drives only television use ( $\beta = 0.18^{***}$ ). Attitudes towards misinformation were significant in determining media dependencies, except for television consumption. The perception of being able to fact-check information contribute to higher media use in general ( $\beta = 0.16^{***}$ ) and to higher social ( $\beta = 0.08^{***}$ ) and online media use ( $\beta = 0.15^{***}$ ). Those who find it difficult to evaluate false from true information use media in general ( $\beta = -0.09^*$ ) and online media ( $\beta = -0.11^*$ ) less frequently. Different goals drive audiences to different media sources. The social understanding goal drives them to higher media use, television use and especially online media use, while orientation towards the self-understanding and play&communication goals contribute to media use in general as well as to social media use.

## Explaining goals in media use

Age is also important in determining different goals in media use. Younger audiences are oriented towards play&communication ( $\beta = -0.13^*$ ). Gender is also significant in explaining goals in media use. Women used media more for self-understanding ( $\beta = -0.2^{***}$ ) and play&communication ( $\beta = -0.08^*$ ). Isolation during lockdown significantly contributed to different goals in media use and audiences isolated at home during lockdown were oriented towards social understanding ( $\beta = -0.08^*$ ), but even more to self-understanding ( $\beta = -0.12^{**}$ ) and play&communication ( $\beta = -0.1^{**}$ ) than those who were leaving their homes because of work.

Perception of threat and coping mechanisms were significant in explaining media use goals. Audiences who perceived threat to be high oriented themselves to social understanding ( $\beta = 0.13^{***}$ ). Both active and avoidance coping were significant in explaining all media goals- however active coping is the strongest predictor of social understanding ( $\beta = 0.18^{***}$ ) and avoidance coping is strongest predictor of self-understanding ( $\beta = 0.2^{***}$ ).

Social understanding goal is explained by online media use ( $\beta = 0.23^{***}$ ), trust in media ( $\beta = 0.25^{***}$ ) and feelings of efficacy in fact-checking information ( $\beta = 0.14^{***}$ ). Social media use and less self-confidence in dealing with misinformation drive audiences to media use which is oriented towards self-understanding or play&communication. Social media use ( $\beta = 0.3^{***}$ ), trust in media ( $\beta = 0.11^{***}$ ), but lack of self confidence in the ability to evaluate trustworthiness of facts ( $\beta = 0.14^{***}$ ) predict higher orientation towards self. Social media use ( $\beta = 0.4^{***}$ ) and a feeling of being exposed to misinformation ( $\beta = 0.12^{***}$ ) drives audiences towards entertainment and relaxation uses of media.

TABLE 4  
Results of the  
regression analysis  
predicting media use  
goals

	Social understanding			Self-understanding			Play&communication		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
(Constant)	15.813	6.835	1.153	14.163	8.173	1.886	15.77	12.678	5.556
Age	0.15***	0.1*	0.09	-0.06	-0.07	0.11	-0.4***	-0.41	-0.13*
Gender	-0.1*	-0.05	-0.05	-0.25***	-0.21***	-0.2***	-0.1*	-0.07***	-0.08*
Isolation (vs. non-isolation)	-1.11*	-0.1*	-0.08*	-1.15***	-0.12**	-0.12**	-0.11**	-0.11**	-0.1*
Income	0.087	0.11*	0.08*	0.04	0.08	0.06	0.05	0.06	0.06
Education	0.008	-0.03	-0.06	-0.09	-0.13**	-0.15***	0.09*	0.06	0.04
Earthquake region (vs. non-earthquake)	-0.12**	-0.1**	-0.07	-0.07	-0.08	-0.06	-0.03	-0.03	0.01
Perception of threat		0.21***	0.13***		0.05	0.0		0.02	-0.01
Active coping		0.3***	0.18***		0.18***	0.14***		0.17***	0.1*
Avoidance coping		0.1*	0.07		0.24***	0.2***		0.1*	0.06
Social media use		0.0	0.0			0.3***			0.4***
Television use		0.04	0.04			-0.01			-0.00
Online media use		0.23***	0.23***			0.06			-0.01
Trust in all media		0.25***	0.25***			0.11**			0.06
Hard to evaluate misinformation		0.04	0.04			0.14***			0.01
Exposed to misinformation		0.06	0.06			-0.02			0.12**
Fact-checking practices		0.14***	0.14***			0.05			0.05
R <sup>2</sup>	0.06	0.22	0.38	0.1	0.22	0.31	0.21	0.25	0.38

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

## Explaining effects on emotional reactions

Surprisingly, although people in older age groups are at higher risk of negative consequences of the Covid-19 infection, older audiences had less negative emotional reactions to the crisis ( $\beta = -0.20^{***}$ ). Women had significantly stronger emotional reactions to the crisis ( $\beta = -0.28^{***}$ ). This was also shown in previous research (Lachlan et al., 2010). Perception of threat ( $\beta = 0.3^{***}$ ), and avoidance coping ( $\beta = 0.2^{***}$ ), both predict higher feelings of emotional distress, while active coping eases the feelings of distress ( $\beta = -0.09^*$ ). Being in isolation or in the earthquake region did not have a significant effect on higher levels of emotional distress. Use of online media ( $\beta = 0.11^*$ ) and perception of being exposed to misinformation ( $\beta = 0.12^{**}$ ) are also connected to emotional distress. This goes in line with previous research which proved that higher media consumption during and after a traumatic event adds to psychological distress (Lachlan et al., 2010).

**TABLE 5**  
Results of the regression analysis predicting emotional reactions

	Emotional reactions		
	Model 1	Model 2	Model 3
(Constant)	27.47	14.09	9.40
Age	-0.21 <sup>***</sup>	-0.27 <sup>***</sup>	-0.20 <sup>***</sup>
Gender	-0.35 <sup>***</sup>	-0.27 <sup>***</sup>	-0.28 <sup>***</sup>
Isolation (vs. non-isolation)	-0.06	-0.01	0.00
Income	-0.01	0.03	0.03
Education	-0.02	-0.01	-0.03
Earthquake region (vs. non-earthquake)	-0.07	-0.03	-0.03
Perception of threat		0.32 <sup>***</sup>	0.30 <sup>***</sup>
Active coping		-0.07 <sup>*</sup>	-0.09 <sup>*</sup>
Avoidance coping		0.20 <sup>***</sup>	0.20 <sup>***</sup>
Social media use			0.04
Television use			-0.05
Online media use			0.11 <sup>*</sup>
Trust in all media			0.03
Hard to evaluate misinformation			0.06
Exposed to misinformation			0.12 <sup>**</sup>
Fact-checking practices			-0.02
<i>R</i> <sup>2</sup>	0.21	0.36	0.39

\* $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

## DISCUSSION AND CONCLUSION

During crisis, audiences were using media for social understanding, self-understanding and play and communication. Interpreting this from the MDT perspective, it seems that both the need for relaxation, reflection and the need for information were equally important in the crisis period.

What emerges from the analysis is that the goal of social understanding is important for following professional news organisation sources. However, general trust in media predicts only the use of legacy media, television. Another important conclusion is that the most vulnerable audiences, with lower trust in media and who perceive themselves as not being able to detect misinformation seek information less, especially from professional news and expert sources.

Education was proven to be important in predicting media use during a crisis, especially online professional news, and expert sources. This is in line with previous research which showed that more educated audiences rely less on traditional media and use wider information sources to navigate in the crisis (Lowery, 2004). Younger audiences used media in general more, especially social media, and were oriented towards play&communication. Play as a major goal that youth pursue when facing a crisis, may imply that using media to help deal with stress and emotions is essential (Lyu, 2012). Older audiences were dependent on television, and oriented towards social understanding. Although older age groups in Croatia perceived the threat of Covid-19 as higher (Bagić & Šuljok, 2021), the results of this research suggest that negative emotional reactions to a crisis seem to become milder with age. This could be explained by the tendency of older age groups to be more successful in regulating negative emotions (Knepple Carney et al., 2021).

Women's total media use and television use was higher, as they used media more for self-understanding and play&communication and had stronger emotional reactions to the crisis. Previous research suggests that women in crisis tend to ruminate more on the received information, which raises the level of negative emotional reactions (Lachlan et al., 2010). Women in Croatia perceived Covid-19 to be a greater threat than men did (Bagić & Šuljok, 2021). Qualitative research about the way women responded to the Covid-19 crisis and lockdown discovered gender inequalities in the way the burden of crisis is distributed (Brajdić Vuković & Doolan, 2021). Women focused on their emotional states and household routines and took the role of the glue of the household (Brajdić Vuković & Doolan, 2021). This could explain why the self-understanding and play&communication orientation was more pronounced in the way women used media.

Being affected by an earthquake or being isolated at home during lockdown mostly did not have a significant effect on media use. There were some differences between regions hit by the earthquake and those who were not affected, as audiences from the Zagreb area were more dependent on social media and oriented towards social understanding. However, this correlation was lost when media trust and misinforma-

tion were included. Isolation during lockdown, however, significantly contributed to differences in media use, and audiences isolated at home were oriented towards social understanding, but even more to self-understanding and play&communication. Being in isolation or in an earthquake region did not provoke higher levels of emotional distress. Although these results seem surprising, it is shown that severity and scale of crisis is sometimes less important for media dependency than the way the crisis is perceived (Melki & Kozman, 2021). Another analysis confirmed that there were no significant differences in perceived stress between the Zagreb region and others after the earthquake, suggesting that news about the earthquake could have caused stress in other regions as well (Uzelac et al., 2021).

Perception of threat, ways of coping with stress, and perception of misinformation had greater effect on media use and emotional distress than being more directly exposed to a stressful event. Audiences who perceived threat to be high tended to orient themselves to social understanding in their media use and had stronger negative emotional reactions to stress. Active approach in coping with stress was correlated with higher media use for different purposes and less emotional distress. On the other hand, avoidance coping has no correlation to media use, is connected to self-understanding and contributes to greater emotional distress. In this case, media use seems to mostly have had a role in alleviating stress through active coping, while avoidance coping resulted with more withdrawal from media use and stronger emotional distress. However, the use of online media was correlated with higher emotional distress. Previous research showed that clear and factual communication alleviates stress during crisis, while ambiguous information could heighten perceived threat and provoke the spread of misinformation (Garfin et al., 2020).

Perception of misinformation added another level of anxiety and contributed to differences in media use. Those who found it difficult to evaluate false from true information used media less and were orientated towards self. The feeling of being exposed to misinformation drove audiences towards entertainment and relaxation uses of media and had an impact on higher emotional distress. On the other hand, audiences who self-reported use of fact-checking practices in a greater amount used media more and were oriented towards social understanding.

This study has several limitations. First, the convenience sample is biased towards certain socio-demographic groups, so the results should be interpreted with this in mind. Second, data collection started almost three weeks after most of the measures of restriction of movement were taken, and two weeks after an earthquake hit Zagreb. Therefore, media use

and effects might have been higher in the beginning of the crisis. Third, the results only reflect the situation during the first wave of the pandemic, and do not explain changes in media use and trust in other waves of the pandemic. However, the study offered some evidence on how media dependency functions in a high-choice media environment. Even when audiences can freely select between many different information sources, this study shows that professional news organisations are still relied on the most for the goal of social understanding and information, while social media are more connected to entertainment and interpersonal communication uses.

## NOTES

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<sup>1</sup> Social media use is computed by adding these frequencies of use: following social media posts, instant messaging, YouTube use, using music via Internet and streaming services (Cronbach  $\alpha = 0.77$ ). Online media use is computed from online newspapers, digital born media, international media, websites of official authorities and experts (Cronbach  $\alpha = 0.72$ ). As international media form a factor together with online media, we suppose the audiences in this sample consume international media mostly through online sources. Television use is computed from commercial and public television (Cronbach  $\alpha = 0.64$ ).

<sup>2</sup> Original variables were based on the statements: The current situation is very dangerous; I am worried about the current situation; I am personally vulnerable in this situation; Someone close to me is vulnerable in this situation. Respondents marked their agreement on a four-point scale – from 1 (I completely disagree) to 4 (I completely agree).

<sup>3</sup> The strength of these emotions was measured on a scale from 1 (never or almost never) to 5 (very often or always). Participants answered the question: "How often did you feel like this in the previous month?". The instrument was adapted from Lachlan et al., 2009.

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## Ovisnost o medijima u višestrukoj krizi: informiranje i povjerenje u medije nakon potresa uslijed pandemije koronavirusa

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U radu se analizira odnos između povjerenja u medije i informiranja iz perspektive teorije ovisnosti o medijima. Cilj je istraživanja otkriti ciljeve upotrebe medija tijekom krize te način na koji povjerenje i percepcija misinformacija utječu

na upotrebu medija. Istraživanje je provedeno u proljeće 2020. godine, tijekom pandemije virusa Covid-19, a nakon potresa koji je pogodio Zagreb. Podaci su prikupljeni internetskom anketom na prigodnom uzorku ( $N = 741$ ). Identificirana su tri cilja upotrebe medija: razumijevanje društva, razumijevanje sebe te igra i komunikacija. Obrazovanje, dob i spol značajni su prediktori upotrebe medija tijekom krize. Povjerenje u medije povezano je s upotrebom tradicionalnih medija i potrebom za razumijevanjem društva, dok je percepcija izloženosti misinformacijama korelirana sa smanjenom upotrebom medija.

Ključne riječi: teorija ovisnosti o medijima, upotreba medija, povjerenje u medije, kriza, Covid-19



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