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# Trust in information sources during the COVID-19 pandemic. A Romanian case study

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**Abstract:** Higher levels of trust in credible sources of information in times of crisis such as the current COVID-19 pandemic increase public compliance with official recommendations, minimizing health risks and helping authorities manage the crisis. Based on a national survey (N=1160), this article explores (a) actual levels of trust in various sources of information (government websites, legacy media, social media, and interpersonal communication) during the pandemic and (b) a number of predictors of such trust. Results show that during the period studied government websites were the most trusted source of information. Trust in an information source is correlated with consumption of COVID-19–related news from that specific source, media fact-checking, and self-perception about the incidence of COVID-19–related fake news. Only income and age are significant trust predictors, and only with respect to specific source types.

**Keywords:** crisis communication, media effects, media use, news consumption, sources of information, information sources, fake news

## 1 Introduction

In the last twenty years humankind has faced several major challenges: rapid population growth, sweeping climate change, growing inequalities, an aging population, and major uncertainties regarding the future of work (Brown-Martin, 2016). To add insult to injury, recent years have also seen the emergence of

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several infectious diseases: SARS (severe acute respiratory syndrome) in 2003, avian influenza (H5N1) in 2005, swine flu A(H1N1) in 2009, MERS-CoV (Middle East respiratory syndrome coronavirus) in 2012, and last but not least, COVID-19. On March 11, 2020 the World Health Organization (WHO) stated that the latter had caused the world's first ever coronavirus pandemic. While we were conducting this research, specifically on March 23, 2020, the number of worldwide COVID-19 cases surpassed 350,000, with more than 15,000 deaths attributed to the virus. In Romania the total number of cases was 576, with seven deaths. At that time many restrictions on freedom of movement and assembly were already in place, and schools were closed throughout Europe, Romania included. In the spring of 2020 both legacy media and social media focused almost exclusively on topics related to the COVID-19 pandemic (Ferraresi, 2020). At this time the Romanian authorities launched a nationwide COVID-19 awareness campaign on various channels, including television and social media (Dascalu, 2020).

Researchers studying similar crises have investigated levels of public trust in the authorities and the media. For example, Bangerter (2014) noted that the public was becoming increasingly skeptical about the risks associated with emerging infectious diseases—a mistrust that has only worsened since. Ever-larger numbers of people now view public health organizations, government agencies, universities, and the media as co-conspirators in plots to exploit disease outbreaks for profit. This is unfortunate inasmuch as other researchers (Siegrist and Zingg, 2014) have shown that in times of crisis compliance of the public with official recommendations hinge on such trust. For instance, a 2009 Italian study conducted with reference to the A(H1N1) pandemic found that people who trusted media organizations and the health ministry tended to follow the recommended behaviors, unlike those who did not. In other words, since the media bring people access to social reality (McQuail, 1994), shaping their perceptions and future behaviors, trust in a specific media outlet and belief in the reality of the threat are two major factors driving compliance with specific recommendations—a prerequisite for lowering health risks (Taha et al., 2013) and better managing the crisis.

In approaching the current pandemic, it is crucial to look both at risk communication/management and crisis communication/management. This pandemic is so complex and of such catastrophic proportions that it naturally includes both a risk and a crisis component. Our starting point is the idea that “risk is likely to surpass crisis in volume of discussion merely because it is foundational to crisis” (Heath and O’Hair, 2009, p. 1). Thus, we largely view the March 2020 situation as a “risk communication context”, while subsequent phases (post-summer of 2020) were dedicated to more specific crisis-communication activities. Hence, we posit that the COVID-19 pandemic differs somewhat from past pandemics—mainly due to specifics aspects of the current information ecosystem that were absent during

previous pandemics. Today, people have access to a much larger variety of information sources. Disinformation, misinformation, and mal-information are more prevalent and are unsurprisingly framed as an *infodemic*<sup>1</sup>. Mass usage of social networking sites (SNSs) and instant messaging (IM) platforms makes it possible to disseminate information (including conspiracy theories) extremely rapidly. Media consumers are exposed more often to contradictory information. And near-instant access to interpersonal communication supercharges the rumor-mill. Together with the many uncertainties surrounding COVID-19-related information and a lack of empirically based, easily generalized studies, these factors make it even more difficult to understand the crisis and develop viable solutions. We shall look at such aspects with a view to shedding more light on the ways in which trust in the media influences the filtering/processing of COVID-19-related information at the individual level.

To our knowledge, this study of trust in information sources with respect to the COVID-19 pandemic is the first ever conducted in Romania, and one of the first in Europe. As a starting point, we posit that the media is the main disseminator of information about very new and “exotic” topics (issues with which people have had no first-hand experience)—COVID-19 being one of them. Our analysis focuses on the general level of trust in the media among Romanian people (that is, trust which is not context dependent). According to the latest Eurobarometer survey (European Commission, 2019), 70 % of Romanians have high to medium levels of trust in the media (media trust index). In comparison, 60 % of Europeans (EU 28) show high to medium levels of trust in the media. Romanians therefore appear to be more trusting of media organizations than their fellow Europeans. As part of a more recent study asking Romanians whether they thought they could trust most news, most of the time, 38 % answered in the affirmative (Watson, 2020). Data on media trust levels in Romania during and shortly after health-related crises are not available, so we cannot make comparisons at this level. Let us however state that we approach the concept of trust from two perspectives: a general one (trust in media institutions and news media), and a specific one which is the focus of our empirical analysis— that is, trust in specific sources of information. Based on this we conducted an online survey ( $N=1160$ ) on a representative sample of Romania’s online population in March 20–23, 2020 to investigate (a) levels of trust in various sources of information (government websites, legacy media, social

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<sup>1</sup> Tedros Adhanom Ghebreyesus, the Director-General of the World Health Organization (WHO), used the term at a gathering of foreign policy and security experts in Munich (Germany) in mid-February 2020 : “We’re not just fighting an epidemic; we’re fighting an infodemic. Fake news spreads faster and more easily than this virus, and is just as dangerous” (<https://www.who.int/dg/speeches/detail/munich-security-conference>).

media, and interpersonal communication) during the COVID-19 pandemic and (b) the predictors of such trust.

## **Trust and predictors of trust in information sources in times of crisis**

Despite the lack of a generally accepted definition, trust is considered to be inherent to all human relationships and an essential building block of social order (Barber, 1983; Kramer and Tyler, 1996). Defined as the “expectation that arises within a community of regular, honest and cooperative behavior, based on commonly shared norms” (Fukuyama, 1995, p. 26), the “confident, positive expectations regarding another’s conduct” (Lewicki et al., 1998, p. 439), or the “willingness to be vulnerable” (Mayer et al., 1995, p. 724)—trust plays a crucial role in shaping social behaviors.

Trust is particularly important in times of crisis, especially health-related crises, when people face high levels of uncertainty, risk, and vulnerability. The public needs access to reliable information sources so as to correctly assess the severity of the situation and therefore comply with the protective measures taken by government and health officials. Most studies we reviewed did seek to identify potential correlations between public trust in sources of information in times of health crisis and people’s attitudes and behavioral responses (e. g., compliance with health protocols, getting vaccinated—Freimuth, 2013; Vardavas, 2021; van der Weerd et al., 2011; Wong and Sam, 2010). For instance, studies conducted during the A(H1N1) influenza pandemic in the Netherlands (van der Weerd et al., 2011) and in the USA (Freimuth et al., 2013) assessed the relationship between trust in government, risk perception, and willingness to follow protective measures. As it turned out, the most trusted sources of information were the municipal health services, healthcare providers, and the media in the Netherlands, and the family doctor in the USA. In the Netherlands, greater trust in the government was associated with stronger intentions to obtain vaccination and comply with protective measures. Conversely, in the USA researchers found low levels of trust in government, which led to a low vaccination rate. In the context of the COVID-19 pandemic, Vardavas et al. (2021) collected data from G7 countries and showed that individuals who cited government or politicians and friends or family as their most reliable information source were more likely to trust measures taken by the authorities.

It is worth mentioning that there is no such thing as a fixed hierarchy of entities which individuals might trust during a health crisis. In other words, variables such as education level and ethnic or cultural background tend to affect how

much people trust different sources of information. Voeten et al. (2009) discovered that during the SARS pandemic Chinese people in the UK and the Netherlands mentioned family and friends as their main source of information, followed by the Chinese media. On the other hand, British and Dutch respondents cited newspapers as their main sources of information.

Although in today's world news media trust is "fragile" (Strömbäck et al., 2020), traditional and new media have been consistently found to be among the most common (and trusted) sources of information during pandemics. They play a central role in risk communication because media representations contribute to identifying and characterizing hazards by visualizing risks and potential dangers and rendering them perceptible to the wider society (Beck, 1992). However, when it comes to new media, and especially social media, which play an essential role in people's media diets these days, the trust issue requires a more nuanced approach. In such media there are virtually no journalistic gatekeepers. Objectivity and balance can be bypassed, and unfiltered information, including outright falsehoods, may be spread by a multitude of actors (Hameleers, 2020, p. 284). Moreover, people's perceptions of sources or stories affect the impact of such information on their attitudes, beliefs, and behaviors, so that source credibility plays an important role in the way individuals engage with social media. For example, people tend to blindly trust content "shared" by members of their own social media group (Shareef et al., 2019), and they are more likely to give credit to an article endorsed by a trusted public figure (Sterrett et al., 2019).

As Peters et al. (1997) empirically demonstrated, information is trusted when it originates from individuals or institutions exhibiting expertise, knowledge, openness, honesty, concern, and care. A relatively consistent body of work shows there is a correlation between media use and media credibility—the higher the usage of a particular medium, the higher the trust in that medium (Jakob, 2010). Additionally, high credibility perceptions result in a reliance on a specific medium for news, which in turn increases the frequency of exposure to that medium (Choi et al., 2006). Searching for information usually gives people an opportunity to reduce uncertainty (Kuhltau, 1993) and to make sense of their world (Dervin, 1992). Therefore, we hypothesize the following:

- H1: The higher the news consumption from a given source of information on a crisis-related topic, the higher the tendency to trust information from that specific source.
- H2: The higher the level of uncertainty about information on a crisis-related topic, the higher the tendency to trust the information about this topic, irrespective of its source.

In today's media landscape, shrouded in "info-smog" (Coleman, 2012, p. 36) and marked by widespread disinformation, it is important that people adopt an attitude of "skeptical knowing" (Kovach and Rosenstiel, 2010, p. 26). That is, rather than blindly trusting what they read or see, they should critically examine information sources. But sticking to such a critical approach is no easy task, especially in the case of news disseminated via the internet/social media. Unlike legacy media, digital media lacks professional gatekeepers (Metzger et al., 2003), and the boundaries between traditionally accepted hierarchies of reliable information providers (such as quality vs. tabloid press, mainstream vs. non-mainstream sources) are being blurred (Flintham et al., 2018). Some studies have revealed a positive correlation between information verification and information trustworthiness. For example, Flanagin and Metzger (2000, p. 518) discovered that efforts to validate information are important predictors of trust and that more experienced internet users are more inclined to consider the internet to be a credible source of information and to regularly verify the information they encounter. These findings imply that fact-checking engenders higher perceptions of credibility. Torres et al. (2018) also showed that, rather counter-intuitively, an increase in trust in social media networks goes hand in hand with an increase in news verification behaviors, with trust in the media in general playing an important role in the fact-checking process (Shin and Thorson, 2017). In this respect, we hypothesize the following:

- H3: The higher the tendency to fact-check information from the media, the higher the tendency to trust the media.

In many parts of the world, social media and instant messaging applications are an integral part of everyday life, providing a collective space for consuming and sharing information and building and maintaining interpersonal relationships. On these platforms "mainstream news is often displayed alongside commentary, personal stories, rumors, jokes, and deliberate misinformation" (Ognyanova, 2019, p. 540); this fact poses a serious challenge to the accuracy and objectivity of information and, generally, for trust in information sources. Ognyanova (2019) underlined that personal interactions and peer ratings are important predictors of perceived credibility in online information, particularly in times of great uncertainty or vulnerability, when people's social networks might help them decide who and what to trust (Cook and Santana, 2018). Based on these findings, we theorize the following:

- H4: The higher the engagement with a crisis-related subject matter on social media and instant messaging platforms, the higher the tendency to trust social media news about the crisis.

It is important to also note that in times of crisis people's trust may be undermined by conspiracy theories. Conspiracy beliefs have been linked to factors such as powerlessness (Abalakina-Paap et al., 1999), anxiety and uncertainty (Van Prooijen, 2020), or political alignment (Enders and Smallpage, 2018). Allington et al. (2020) discovered a positive association between COVID-19 conspiracy beliefs and use of social media as a source of information for the current pandemic, and a negative relationship between conspiracy beliefs and reliance on legacy media. They also found that lack of regulation makes social media more likely to disseminating medical disinformation. Goreis and Kothgassner (2020) have observed that in times of crisis people who believe in conspiracy theories are less likely to take preventive health measures. We therefore posit the following:

- H5: The higher the tendency to believe in conspiracy theories about a crisis-related topic, the higher the tendency to trust information from social media, family, and friends and to distrust legacy media and official sources.

Education is an important factor influencing media behavior (Self, 1988), and it is positively associated with general news exposure (Poindexter and McCombs, 2001). In a study from the beginning of the internet era focused on in sources of health-related information, Dutta-Bergman (2003) found that, when it came to medical information, less-educated people trusted hospitals more, while more educated people favored the websites of medical universities. Today's massive social media presence severely undermines the accuracy of health-related information. For instance, Brown-Johnson et al. (2018) have shown that less-educated individuals may readily absorb unreliable, pseudo-medical health information found on social media/the internet. Diviani et al. (2015) also showed that people with low health literacy evaluate online health information based on search result rankings and image quality, and that they tend to distrust health information from online institutional sources, while better educated people are more likely to favor well-designed websites and to check the latter's credentials. Therefore, we posit our final hypothesis:

- H6: The higher the level of education, the higher the tendency to trust official sources of information (official sites) about crisis-related topics.

## 2 Method

We conducted a national survey using an online panel ( $N=1,160$ ), representative of the online, non-institutionalized population of Romania aged 18 and above. The survey was conducted on March, 20–23, 2020 by QUESTIA, a national polling organization.<sup>2</sup> The mean age in the sample was 44.86 years ( $SD=12.87$ ; with the following distribution: 4.4 % people aged 18–24; 19.9 % people aged 25–34; 26.9 % people aged 35–44; 24.7 % people aged 45–54; 15.9 % people aged 55–64; and 8.2 % people aged over 65). The sample was skewed to some extent; women (56.7 %), urban residents (87.2 %), and university graduates (56.2 %) were overrepresented. For contextual background, at the time of the present survey, Romania had officially registered 576 cases of COVID-19 and seven deaths.

### Measurements

**Trust in sources of information in times of crisis** was assessed using items measured on a 7-point Likert scale ranging from 1 (*totally distrust*) to 7 (*totally trust*). Thus, trust in legacy media was measured using four items (television programs, print and online newspapers, radio, and journalists), which loaded on one factor, with loadings ranging from .825 to .879 ( $\alpha=.870$ ,  $M=4.18$ ,  $SD=1.41$ ). Trust in government websites was measured using two items (trust in official statistics and trust in specialized sites;  $r_{SB}=.720$ ,  $M=5.36$ ,  $SD=1.42$ ). Trust in SNSs and trust in information from family and friends were measured with one individual item (for  $M$  and  $SD$ , see Table 1).

**Consumption of COVID-19–related news** (frequency of use) was measured for each specific source (legacy media, government websites, SNSs, and family and friends), on a scale from 0 (*never*) to 7 (*daily*), approximating the number of days in the last week that people consume news from that specific source. Consumption of COVID-19–related news from legacy media outlets was measured using three items (television programs, print and online newspapers, and radio news consumption), which grouped as one factor, with loadings ranging from .693 to .750 ( $\alpha=.538$ ,  $M=4.12$ ,  $SD=1.82$ ). Consumption of COVID-19–related news from government websites ( $M=3.75$ ,  $SD=2.68$ ) and SNSs ( $M=4.19$ ,  $SD=2.77$ ) were measured using individual items. Consumption of COVID-19–related news from

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<sup>2</sup> The pollster provided the reference data for the online Romanian population, as of 2017 (with a calibration from a national CATI survey on 3700 people): the internet penetration rate (not only broadband) is estimated at about 89 %. The sociodemographics of the general online population of Romania are: 50.3 % males, 39.5 % rural areas, 29.81 % higher education.

family and friends was estimated using a proxy related to the number of days in the prior week people followed information about COVID-19 on IM platforms ( $M=1.50$ ,  $SD=2.38$ ), the logic being that messages received by a person on IM platforms would generally be (almost exclusively) from people that are considered to be close friends or from family members.

**Frequency of personal mediated interaction** was measured on a 7-point Likert scale ranging from 1 (*very rarely*) to 7 (*very often*) using two items; respondents were asked whether they talked with friends and family either over the phone or on IM platforms. ( $r_{SB}=.740$ ,  $M=4.92$ ,  $SD=1.83$ ). Respondents were asked to assess the frequency with which they had discussed COVID-19-related issues with friends or family in the previous week. We chose to exclude face-to-face interactions because those were not possible due to the isolation recommendations and later lockdown process.

**Media fact-checking** was measured using a 7-point Likert scale ranging from 1 (*to a very small extent*) to 7 (*to a very great extent*); respondents were asked about six certain actions people usually do in order to check the truthfulness of the information found in the media. Examples of items included are “You have compared various sources of information to check the facts,” “You have relied on the reputation of the journalist and on the reputation of the source,” and “You have checked your first thoughts about that information with friends or relatives.” The items loaded on one factor, with loadings ranging from .552 to .821 ( $\alpha=.843$ ,  $M=4.37$ ,  $SD=1.58$ ).

**Self-perception about the incidence of COVID-19-related fake news** was measured using a 5-point Likert scale ranging from 1 (*rarely or never*) to 5 (*several times a day*). Respondents were asked to answer the following question: “How often have you received information about COVID-19 that you believe to distort reality or even be false?” ( $M=3.84$ ,  $SD=1.05$ ).

For **belief in conspiracy theories about COVID-19** we used a composite scale of five items, ranging from 1 (*believe to be completely false*) to 7 (*believe to be completely true*). Respondents were asked to judge five statements related to prominent narratives circulating in the alternative media during March 2020, claiming that the virus is a biological weapon, that it was artificially created to either stop the aging process, to make people ill or to trigger a worldwide economic crisis. The items loaded on one factor, with loadings ranging from .570 to .892 ( $\alpha=.859$ ,  $M=3.73$ ,  $SD=1.89$ ).

**Uncertainty about general information about COVID-19** was measured on a one-item scale ranging from 1 (*very uncertain*) to 7 (*very certain*) ( $M=3.62$ ,  $SD=1.81$ ).

**Engagement on social media and IM platforms** was measured with two-item 7-point Likert scale assessing the frequency of engagement (1 = *very rarely*, 7

= *very often*) in terms of sharing information about the COVID-19 on SNSs and on IM platforms ( $r_{SB}=.810$ ,  $M=3.25$ ,  $SD=2.14$ ).

**Education** was measured on an 8-point ordinal scale. *Income* was measured on a 5-point ordinal scale based on people’s perceptions about how well they were coping with their income. **Residence** was measured as a dichotomic variable (rural vs. urban areas).

### 3 Findings

First, we analyzed the degrees of trust people place in four main sources of information: legacy media (traditional television channels, print and online newspapers, radio, and journalists), government websites (official statistics and specialized sites), SNSs, and interpersonal communication with family and friends. Results are in line with our expectations that in times of crisis people tend to trust government websites significantly more than any other source of information (for Descriptives, see Table 1). According to the literature to date (e. g., Quinn et al., 2013), high levels of trust in official sources are associated with higher levels of compliance with measures implemented to reduce the spread of the virus and minimize health risks. On the other hand, we found SNSs to be the least trusted sources of information about the COVID-19 pandemic. There are two possible explanations for these results. First, people tend to associate the use of SNSs with socializing and entertainment (López et al., 2017), turning to traditional media for information (Gil de Zúñiga et al., 2017). Second, they view SNSs as hotbeds of questionable information (Buchahan and Benson, 2019; Crest Research, 2020), deeming them less trustworthy in times of crisis.

**Table 1:** Levels of trust in different sources of COVID-19–related information, ranging from 1 (*totally distrust*) to 7 (*totally trust*)

|                                              | N     | Mean | SD   |
|----------------------------------------------|-------|------|------|
| Trust in official sites                      | 1,138 | 5.36 | 1.42 |
| Trust in legacy media                        | 1,141 | 4.18 | 1.41 |
| Trust in information from family and friends | 1,119 | 4.02 | 1.6  |
| Trust in SNSs                                | 1,125 | 3.25 | 1.6  |

Second, we analyzed the main predictors of trust in sources of information. To discuss the main variables predicting trust in various sources we constructed four OLS regression models, taking into account the four main types of information sources people might be exposed to (see Table 2).

**Table 2:** OLS regression models predicting trust in various sources of information in the context of the COVID-19 pandemic.

|                                                                                         | Trust in<br>legacy<br>media (β) | Trust in<br>government<br>websites<br>(β) | Trust in<br>SNSs (β) | Trust in infor-<br>mation from<br>family and<br>friends (β) |
|-----------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------|----------------------|-------------------------------------------------------------|
| Block 1                                                                                 |                                 |                                           |                      |                                                             |
| Education <sup>a</sup>                                                                  | -0.031                          | -0.034                                    | -0.046               | -0.023                                                      |
| Income <sup>b</sup>                                                                     | 0.021                           | .065*                                     | 0.027                | .088+                                                       |
| Gender (female) <sup>c</sup>                                                            | 0.051                           | 0.04                                      | 0.044                | 0.004                                                       |
| Residence <sup>d</sup>                                                                  | 0.047                           | 0.016                                     | 0.029                | 0.013                                                       |
| Age                                                                                     | 0.014                           | 0.042                                     | .048+                | .085*                                                       |
| R <sup>2</sup> change                                                                   | 0.012                           | 0.009                                     | 0.015                | 0.015                                                       |
| Block 2                                                                                 |                                 |                                           |                      |                                                             |
| Consumption of COVID-19–related<br>news from that specific source <sup>e</sup>          | .243**                          | .128**                                    | .129**               | .093*                                                       |
| Uncertainty about general infor-<br>mation about COVID-19 <sup>f</sup>                  | .141**                          | .202**                                    | .127**               | .147**                                                      |
| Media fact-checking <sup>g</sup>                                                        | .156**                          | .192**                                    | .142**               | .161**                                                      |
| Engagement on social media and<br>IM platforms <sup>h</sup>                             | .070*                           | 0.036                                     | .165**               | .081+                                                       |
| Belief in conspiracy theories<br>about COVID-19 <sup>i</sup>                            | -0.017                          | -.095**                                   | .068*                | .075+                                                       |
| Frequency of personal mediated<br>interaction <sup>j</sup>                              | .096**                          | 0.042                                     | .097**               | .142**                                                      |
| Self-perception about the inci-<br>dence of COVID-19–related fake<br>news) <sup>k</sup> | -.228**                         | -.085**                                   | -.211**              | -.164**                                                     |
| R <sup>2</sup> change                                                                   | 0.269                           | 0.182                                     | 0.245                | 0.199                                                       |
| Total R <sup>2</sup>                                                                    | 0.281                           | 0.191                                     | 0.261                | 0.214                                                       |
| Adj. R <sup>2</sup>                                                                     | 0.273                           | 0.181                                     | 0.252                | 0.195                                                       |
| N                                                                                       | 1000                            | 1020                                      | 1011                 | 516                                                         |

Generally speaking, trust in a specific source of information was mainly correlated with the consumption of COVID-19 related news to from that source, media fact-checking, and the perceived impact of fake news about COVID-19. Other significant predictors (of varying degrees of trust in specific sources) include personal mediated interaction, uncertainty about COVID-19–related information, belief in conspiracy theories, and SNS and IM engagement. Among sociodemographic variables, only income and age proved to be significant predictors of trust in individual sources of information and only with reference to specific source types (income for trust in government websites, and age for trust in information from family and friends).

Trust in legacy media is mainly correlated with consuming news about COVID-19 topic from legacy media outlets ( $\beta=.24$ ,  $p<.01$ ), self-perceived incidence of fake news about COVID-19 ( $\beta=-.23$ ,  $p<.01$ ), and media fact-checking ( $\beta=.16$ ,  $p<.01$ ). The relationships are as follows: higher levels of news consumption about COVID-19 are correlated with higher levels of trust in legacy media outlets; lower levels of self-perceived exposure to fake news about COVID-19 are correlated with higher levels of trust in legacy media outlets; and a greater tendency to fact-check information found in the media is correlated with higher levels of trust in legacy media outlets. Trust in official sites is mainly correlated with uncertainty about information related to COVID-19 ( $\beta=.20$ ,  $p<.01$ ), media fact-checking ( $\beta=.19$ ,  $p<.01$ ), and consuming news about COVID-19 from government websites ( $\beta=.13$ ,  $p<.01$ ). The most powerful predictors for trust in SNSs are self-perceived incidence of fake news about COVID-19 ( $\beta=-.21$ ,  $p<.01$ ), SNSs and IM engagement ( $\beta=.17$ ,  $p<.01$ ), and media fact-checking ( $\beta=.14$ ,  $p<.01$ ). Incidence of fake news about the COVID-19 topic ( $\beta=-.16$ ,  $p<.01$ ), media fact-checking ( $\beta=.16$ ,  $p<.01$ ), and uncertainty about information related to COVID-19 ( $\beta=.15$ ,  $p<.01$ ) are correlated with higher levels of trust in information gathered from family and friends. The relationships are as follows: lower levels of self-perceived exposure to fake news about COVID-19 are correlated with higher levels of trust in information from family and friends; a higher tendency to fact-check information found in the media is correlated with higher levels of trust in information from family and friends; a higher level of uncertainty about information related to COVID-19 is correlated with higher levels of trust in information from family and friends.

Specifically, the higher the news consumption on topics related to the pandemic from a specific source, the higher the tendency to trust that source (hence, H1 was validated for all types of sources of information). This provides some insight into the dynamics of trust in various sources of information; the higher the news consumption within a given period, the higher the trust in the sources used, which might be the result of a selective exposure process (people tend to be more trusting of familiar information sources that are compatible with their values, stereotypes, beliefs, and opinions). At the same time, if people trust a certain source of information, their tendency to consult that source for further information increases (Fletcher and Park, 2017; Sterrett et al., 2019). Our findings also show that lower levels of uncertainty about official COVID-19 information are correlated with higher levels of trust in all sources of such information (H2 was invalidated). In other words, the more people trust this type of information, the more they trust the sources that disseminate it. One possible explanation is that once they get to know more and more things about a topic, they tend to place increasing trust in the sources of their information.

Regarding fact-checking our results show that the higher the tendency to fact-check news, the higher the tendency to trust COVID-19-related information, irrespective of the source (H3 was validated). Therefore, fact-checking from the media may translate into higher levels of trust in all information sources. This may be because knowing fake news stories are out there in droves, people may have become less skeptical towards the perceived biases of specific information sources. This finding is in line with another recent study that has found that “in its communicative dimension, the COVID-19 outbreak has confirmed citizens’ search for trustworthy and reliable information” (Luengo and García-Marín, 2020, p. 406). In other words, people are more inclined to trust various sources of information in a crisis context if they feel they have the power to “defend truthfulness” (Luengo and García-Marín, 2020, p. 405).

Regarding engagement on SNS and IM platforms about a crisis topic, we expected that higher levels of SNS and IM engagement would be correlated with a greater tendency to trust social media news. Results show that the higher the social media engagement, the higher the tendency to trust news from social media ( $\beta=.17, p<.01$ ), but also news from legacy media ( $\beta=.07, p<.05$ ), and information from family and friends ( $\beta=.08, p<.1$ ); trust in government websites was not correlated with SNS- and IM-related behavior (H4 was partially validated). Therefore, engagement with SNS and IM platforms might be linked to both online and offline patterns of trust.

In terms of belief in conspiracy theories, our findings are in line with our expectations: a higher tendency to believe in conspiracy theories about COVID-19 is correlated with higher levels of trust in information from both SNSs and family and friends, and with lower levels of trust in government websites (only marginally significant for trust in information from family and friends, see Table 2). However, belief in conspiracy theories did not prove to be a significant predictor of trust in legacy media outlets (H5 was partially validated).

Our analysis shows that only income and age are significantly correlated with levels of trust in information sources and only with reference to certain sources (that is, income for trust in government websites and age for trust in information from family and friends). Higher income levels are correlated with higher levels of trust in government websites ( $\beta=.07, p<.05$ ) and with higher levels of trust in information from family and friends ( $\beta=.09, p<.1$ ). Furthermore, the older people are, the more inclined they are to trust information from SNSs ( $\beta=.05, p<.1$ ) and family and friends ( $\beta=.09, p<.05$ ). Education did not prove to be a significant predictor of trust in any source of information (H6 was invalidated). Generally speaking, sociodemographics were correlated to a much lesser extent with trust in various types of media (see incremental  $R^2$  values for all types of sources in Table 2)

Our analysis shows that trust in various sources of information is mainly correlated with contextual or individual variables related to various aspects of dealing with news (consumption, fact-checking, engagement, etc.), and only to a very small extent with sociodemographic variables. These results can possibly explain the dynamics of trust in various information sources during the COVID-19 pandemic, which can make people develop certain attitudes and behaviors that are congruent with the characteristics of the sources they trust more. For example, while more trustworthy sources (government websites) might be considered possible promoters of official recommendations to be followed during a pandemic, less trustworthy sources might be critically analyzed in terms of their potential to disseminate rumors, conspiracies, or even fake news.

## 4 Discussion

This study of the COVID-19 pandemic in Romania shows that the public tends to trust official information in a context of social and political incertitude. A vast majority of people across all age groups, income levels, and levels of education rated official information about COVID-19 provided by scientists, doctors, and other health experts as trustworthy, while SNS and IM platforms were considered less credible. In line with other studies (Nielsen et al., 2020), our results indicate a “trust gap” between official information from news organizations and SNS/IM information. They also show that during pandemics certain segments of the population—namely older people and people more prone to believing conspiracy theories—rely more on social media and IM platforms for their information diet and are reluctant to trust health authorities and other official sources of information.

We found that trust in the media is mainly correlated with the extent of COVID-19-related news consumption as well as fact-checking and the perceived incidence of fake news about the pandemic. Numerous studies (Lewandowsky et al., 2012; Flynn et al., 2017) have shown that people tend to put greater trust in the media channels they use the most to avoid attitude-discrepant information. Recent research (Cinelli et al., 2020a) has also shown that online users are more likely to ignore dissenting information, choosing instead to remain within their filter bubble.

We also found that people are often preoccupied with the accuracy of the information they encounter, especially online. We find that fact-checking and the perceived incidence of fake news are predictors of trust in media in general. The more people see fake news as a large-scale phenomenon, the less they trust the news media. In spite of increased public condemnation of disinformation and

its perils, today's media landscape is mainly characterized by falsehoods and various forms of disinformation. Building on other recent studies (Cinelli et al., 2020a; 2020b), we believe the current *infodemic* has been amplified by the new patterns of information dissemination via social media and IM platforms and by the lack of trust in traditional media.

We also found that people who believe in conspiracy theories about COVID-19 often shun government websites and legacy media, relying solely on SNS and families and friends for their information. Our results also show that the more people share information about COVID-19 on social media and IM platforms, the more they trust such information.

When it comes to sociodemographics, our results show that personal characteristics affect overall media trust to a modest extent. Income and age were the only sociodemographic variables demonstrated to be significantly correlated to trust in some types of media. While other researchers have found that people with little formal education rely less on news organizations than SNS and IM applications for their information diet (Nielsen et al., 2020), we found significant differences in media trust across various educational backgrounds. Education in general does not seem to be a predictor of trust in any source of information. In sum, distrust in the media is found in every social group/sociodemographic, which accurately reflects today's polarized media landscape and its fragmented audiences.

The Romanian context of the pandemic is not unique by any means. The global COVID-19 crisis has resulted in what is sure to be long-lasting changes in the media business and has had a massive impact on trust in media institutions. According to recent reports (Nielsen, 2020) the pandemic has been a "trust test" for the media—one that European ones seem to have failed. According to a recent European Barometer report,<sup>3</sup> journalists are the least trusted source of information about the pandemic, even though a significant majority of the population worldwide stays up to date using mainstream national media.

What's more, in the European Union confidence in the media has been declining over the past five years.<sup>4</sup> In Romania as in other Southern European countries such as Spain and Italy (Ferraresi, 2020), the intense politicization of the media is one cause of the problem. Media predominantly focused on the pandemic. At the outbreak of the crisis, when measures had yet to be implemented and politi-

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<sup>3</sup> Edelman Trust Barometer 2020, Special Report: Trust and the Coronavirus, [https://www.edelman.com/sites/g/files/aatuss191/files/2020-03/2020%20Edelman%20Trust%20Barometer%20Coronavirus%20Special%20Report\\_0.pdf](https://www.edelman.com/sites/g/files/aatuss191/files/2020-03/2020%20Edelman%20Trust%20Barometer%20Coronavirus%20Special%20Report_0.pdf)

<sup>4</sup> IPSOS 2019 Global Report: Trust in the media. <https://www.ipsos.com/sites/default/files/ct/news/documents/2019-06/global-advisor-trust-in-media-2019.pdf>

cal responsibilities were still unclear, the coverage mixed alarmism with political attacks. Besides the mistrust towards media outlets seen as propaganda organs, the shift of power from traditional news institutions to social media has had a tremendous impact on the general narrative about the pandemic.

While a majority of our respondents said that they relied on official information at the beginning of the pandemic, they also said they consistently looked on social media for updates on the crisis. This shows that faced with a complex situation people will look for information from voices they can trust. Unfortunately, the information they encounter online or within their real-life social networks is mostly unfiltered and unverifiable, which has a tremendous impact on the public debate. More research is needed to clarify how the online and offline dissemination of news alters the way information about COVID-19 is processed and passed on and how it affects people's behavior.

## 5 Conclusion

This study sheds light on only a tiny fraction of the interplay between new patterns of media consumption, information dissemination via SNS and IM platforms, and trust or mistrust in official and traditional sources of information. Scholars must study the predictors of trust in the media in greater detail to find remedies for the current *infodemic* and possibly contribute to making public information more effective during global crises such as pandemics.

We have found that although people obtain information about COVID-19 from different sources, they rely most heavily on official sources and view content they access via SNS and IM platforms as less trustworthy. To infer from this that SNS and IM platforms are not influential would be incorrect, however. While people mostly turn to official information sources in the context of the pandemic, what they read and hear on social media (from close friends and family members) can have a greater impact on their opinions and behaviors.

As our findings indicate, much of the public seems to be aware of the spread of various COVID-19-related types of misinformation, rumors, fake news, etc. on SNSs—but the extent to which such awareness helps filter and decode information remains to be seen. Furthermore, since online users are more likely to ignore dissenting points of view (Cinelli et al., 2020a), selective exposure and the tendency to consume only a few, preferred sources of information play a pivotal role in framing the pandemic.

Let us acknowledge that our study, like most others, has its limitations. On the one hand, our sample's limits (especially with respect to education levels)

may exert undue influence on the results. Yet we believe this sample to be sufficiently heterogeneous to allow some generalization about the online population of Romania. On the other hand, our results are specific not only to the national context, but also to the status of the pandemic at the moment of measurement. Given the scope of our study and the evolution of the COVID-19 pandemic since we conducted our research, we believe that similar national studies would offer important insights into the role that the media play in the perception of a pandemic. They also could provide a fertile ground for future comparative, cross-national research about the impact of news consumption patterns, information dissemination, and general trust in the media's capabilities to provide accurate, actionable information about a such a crisis.

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