

Changes in the Approach of Polish Journalists' Use of Social Media Caused by the Covid-19 Pandemic

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ABSTRACT

The article aims to identify and define the changes that are taking place in the approach of Polish journalists to the use of social media and forms of communication between journalists and PR specialists, taking into account changes related to COVID-19. The research in the area of methodology development, tool design, implementation of the adopted assumptions, and report preparation was carried out by the Polish Press Agency in Warsaw (PPA - polish state news agency) and the authors. The result of the survey is 316 questionnaires completed by journalists. During analyses, CATI research was used. The presented results are representative of the journalistic community and allow for extrapolation to the entire population of journalists and media workers in Poland. It was found that the importance of information and its consumption had increased. The situation related to the COVID-19 pandemic has significantly changed the work of Polish journalists publishing their content on social media, which results directly from the significant changes that have affected this medium. An increase in the speed of its spread was also observed. These factors negatively affect the quality of information and its credibility, resulting in fake news. The article presents tools supporting journalists in the fight against disinformation and fake news - which were particularly intense during the COVID-19 pandemic.

Keywords: *Public relations, media, journalists, social media, crisis management.*

INTRODUCTION – CHANGES IN THE SOCIAL MEDIA MARKET

The core function of social media is to distribute information (Appel et al., 2020). Information distributed through social media has an extensive, almost unlimited range of topics and reaches extremely diverse communities (Kapoor et al., 2018). Since the world is facing the coronavirus pandemic, social media has been gathering information from worldwide at an unprecedented pace. It has been used extensively by organisations such as the World Health Organisation - WHO (Hao & Basu, 2020), which for the first time in its history has decided to work together with owners of social media platforms such as Twitter, Facebook, Tencent, and TikTok (Radu, 2020; Ong'ong'a & Demuyakor, 2020). The main goal of this cooperation was to inform the environment about the threat posed by a coronavirus, and how to proceed in the event of infection, which in turn was aimed at reducing the risk of transmission. The reason for such cooperation was also to limit the misinformation spreading on an unusual scale, which significantly complicates the fight against the pandemic (Cinelli et al., 2020). Social media and other health organisations have also been involved in the fight against disinformation. For example, TikTok tried to remove intentionally misleading videos, pointing out that it “does not allow disinformation that could harm its community or a wider audience”. Facebook also worked on removing posts with questionable health advice, while

Tencent, the owner of WeChat, used its platform for fact-checking to examine rumours about COVID-19 circulating on the Internet (Kenney & Zysman, 2020). The pandemic meant that the content posted on social media was much more verified. Social media have become a source of verified information to a much greater extent than before the outbreak of the pandemic (Depoux et al., 2020). The number of anecdotes and reports circulated daily about the state of affairs in China forced the government to reveal accurate information about the crisis. At the beginning of a pandemic, several doctors used social media to warn about the seriousness of the situation. Although the Chinese government decided to control the flow of information, the effect of its actions was counterproductive. When one of the doctors died of coronavirus disease, a wave of bitterness and rage against the government's actions broke out in the Chinese social media, which greatly undermined its authority and forced it to limit censorship and present reliable information further. Such social media activity may also be used to detect and track disease outbreaks (Chan et al., 2020).

One of the many changes that COVID-19 has brought about is the widespread increase in news consumption (Fleming 2020; Merchant & Lurie, 2020). Research by ABC News shows that in the age of social media, anxiety about the coronavirus is spreading faster than the virus itself, resulting in public panic around the world (Mawahed, 2020). On the other hand, social media is also a useful platform for disseminating public health news (Gough et al., 2017). Frenkel et al. (2020) claim that after the WHO found that social media fuel misinformation about COVID-19 worldwide, some of the platforms have tried to remove false information from their sites. The coronavirus pandemic has increased, to some extent, the standard and quality of information published in social media. Medical or health information has unexpectedly become one of the most desired. Many users posted videos with fake news on YouTube and Facebook only to get more views and followers (Sahni & Sharma, 2020). Therefore, journalists publishing on social media have been assigned a critical mission to promote reliable information to a greater extent than ever before (Gawroński, 2010).

Before the pandemic, the spread of disinformation generally focused on specific events such as elections or protests (D'Urso, 2020). Currently, concerning the coronavirus situation, this phenomenon is global. The European Union pays particular attention to preventing disinformation. Josep Borrell (Trullols, 2020), Vice-President of The European Commission and High Representative of the Union for Foreign Affairs and Security Policy, claims that "misinformation in the era of coronavirus can kill". Starting with the origin of the coronavirus, through unproven prevention and "treatments", as well as the reactions of governments, companies, celebrities, and others, there seems to be almost no area untouched by the disinformation due to the COVID-19 crisis (Berger, 2020). The scale related to disinformation during the pandemic is significant and very dangerous (Gao et al., 2020; Pennycook et al., 2020).

To meet this challenge, the ability to use the media and obtain information, particularly the ability to fact-check, became essential. The increase in disinformation can be seen both as a challenge and an opportunity to improve journalism as a profession and institution (Fernandez & Alani, 2018; Ekströmet et al., 2020; Pickard, 2020). While disinformation contributes to public distrust, it also provides an opportunity to develop and regain the credibility of high-quality, ethical, and responsible journalism (Westlund & Hermida, 2020; Flick, 2017). In addition to the dominant-negative effects of "fake news", there are also a few positive consequences, such as the fact that they sometimes provoke social debate and taking action by citizens (Buschman, 2019; Aldwairi & Alwahedi, 2018).

One of the tools that can effectively support journalists, who publish content in social media, in the fight against disinformation is so-called “fact-checking”. Fact-checking organisations are institutions that simply check facts. They most often operate at editorial offices or as independent non-governmental organisations, less frequently in the academic environment. The main goal of fact-checking organisations is to improve the quality of public debate by providing verified and credible information (Graves, 2016). First of all, they focus on verifying the statements of politicians, officials, or other influential people that enter the public sphere (Graves & Cherubini, 2016). Not so long ago, materials distributed mainly by traditional media: press, radio, and television mainly were available in the public space. Thus, it was journalists, editors, and publishers who, with better or worse results, ensured that verified information reached the recipients. They acted as so-called gatekeepers who also decided what information and in what order were presented to the public (White, 1950; Greenfield et al., 2016). The ongoing digital revolution, i.e. the development of the Internet and the rapid expansion of social media, changed this balance of power. Traditional media are slowly but steadily losing their importance. Now anyone can publish information - a citizen journalist, blogger, or influencer using social media. However, not all of these people have the appropriate competencies or use work ethic. In the current flow of information, publication time is often more important than the reliability of the message. The publication process often lacks the element of two-step verification, which was one of the standards in traditional media. Verifying information is a very responsible, and at the same time, extremely difficult task. Especially when we take into account that our brains perceive opinions with which we agree as facts (Gilead et al., 2019). Since 2016, a code of rules developed by the International Fact-Checking Network (<https://www.ifcncodeofprinciples.poynter.org>) covers such principles as impartiality and fairness, transparency of sources, transparency of financing and organisation structure, transparency of methodology, commitment to open and honest revisions. Fact-checkers must prepare their analyses very reliably, and even then, they must consider the risk that the recipients - reflecting on their views - will not believe their findings. Amateur fact-checking is also found in the most popular social media such as Facebook and Twitter (Garret & Poulsen, 2019).

Due to the unprecedented and sudden increase in the consumption of information, the journalists' work in publishing content in social media has changed significantly (Pingree et al., 2018; Lee et al., 2017). A critical factor in responding effectively to a crisis is establishing an efficient exchange of information and coordination between individuals and organisations, regardless of their location (Mirbabaie et al., 2020). A crisis requires a rapid exchange of information, which may negatively impact its quality. Having access to accurate information may stand for the difference between life and death (Murray, 2020). Social distancing during COVID-19 has deprived journalists of important ways to communicate with industry professionals. Conferences, briefings, and other opportunities for obtaining direct information and building relations disappeared as most of these meetings were cancelled (Windelspecht, 2020). Due to social distancing restrictions, many editorial offices were closed, and many journalists suddenly had to start working from home. This sudden change in the working environment required journalists to adopt a completely different approach to their time management, as from home requires high self-discipline and commitment.

As a result of the pandemic, traditional forms of information exchange have been largely transferred to the virtual world, mainly by using new technologies. According to research carried out by the Polish Press Agency - PAP (“Journalists in a pandemic: online work,

new technologies, and fake news” Report), press conferences, webinars, and podcasts held on the Internet by journalists, will increase. Journalists publishing their content on social media should focus more on presenting information in the form of audio-video. Video content on social media is gaining in importance. The fact that there are more and more videos in the news feeds of popular social networking sites is no coincidence (Devereux et al., 2020). Audio streaming in the form of podcasts published on social media is also gaining importance (Land, 2020). In the United States of America, the monthly number of podcast listeners has increased by 54% over the past three years (Baer, 2020). To effectively carry out their work from home, journalists should use quality equipment, mainly in the form of a high-speed Internet connection, web cameras, and microphones (Kiesow, 2020). This is necessary as the demands of social media users regarding the quality of published content are steadily increasing.

LITERATURE REVIEW

The consequence of the Covid-19 pandemic is also an increased interest in journalists’ services in public relations. Public relations can be a marketing tool to build a positive image of the organisation in its environment, which increasingly uses social media in this area (Kietzman et al., 2011; Gawroński, 2016). During a pandemic, there is a social expectation towards organisations of producing messages to ensure people’s safety and comfort in the “new normality” (Zhang et al., 2019; Sudhaman, 2020). The current situation is when human survival is at stake, and few people think about money. Economic affairs remain essential, but preserving life and health security is more important. Organisations and brands are made up of people, which is why currently published content must, to a greater degree than before, be characterised by social responsibility (Tworzydło et al., 2020; Gawroński, 2013). The situation related to the pandemic requires closer cooperation between journalists and PR specialists. This cooperation will be implemented to a greater extent than before the pandemic outbreak using new communication technologies (Kent & Li, 2020; PAP report: Journalist’s work during the coronavirus and lockdown).

An interesting effect of fighting disinformation during the coronavirus pandemic is the increase in the role and importance of local journalism. Local, provincial, and urban social media information profiles are more credible than national media because they actually have reporters in the field and therefore obtain more accurate information (Bentley et al., 2020; Kim et al., 2020; Bernadas & Ilagan, 2020). There is no overarching narrative during a major public health crisis. Many narratives need contextualisation and clarification. Today, the need for local journalism to enter local social media groups is evident (Radcliffe, 2020). Thanks to their activity in social media, local journalists can quickly and effectively reach strictly selected local groups, which is not always possible through the use of mass media.

During the pandemic, the role of social media in building communities and people-to-people bonds has grown significantly. They have proved useful when many people have become isolated from each other. Talking about the coronavirus, especially at the community level, can help us deal with the crisis. Discussions reflect the way society thinks and responds to the crisis. They allow society to overcome this unprecedented type of threat. Scientists and public health experts also use social media to directly contact the public or to discuss new research, while community leaders create ad hoc volunteer networks to help vulnerable neighbours (Moore et al., 2020a; Moore & Hancock, 2020b).

The pandemic has had a significant impact on our mobility. It has been severely limited - reduced to jogging or walking around the house. People “trapped” during the coronavirus pandemic, with closed cinemas and no restaurants opened, spend their time more intensely on social media platforms. Of course, this can have positive consequences, and result in socialisation issues, or mental and somatic problems (Momtaz, 2020; Lin et al., 2020; Malecki et al., 2020; Hampton, 2019). A New York Times (Koeze & Popper, 2020) analysis of Internet usage in the United States based on two online data providers, SimilarWeb and Apptopia, reveals that our behaviour has changed, sometimes rapidly, as the virus spreads. After February 29, 2020, the day the first recorded coronavirus death in the US was revealed, average traffic on social media websites increased significantly, especially on Facebook.com (27.0%). YouTube.com and Netflix.com also experienced significant increases at 15.3% and 16.0%, respectively. Concerning mobile applications, the growths concerned Facebook and Netflix, but were much less spectacular than in the case of websites and amounted to 1.1% and 0.3%, respectively. In the case of the YouTube mobile application, a decrease in traffic by 4.5% was recorded. This may be due primarily to the fact that people locked in their homes preferred to use social media via computer or tablet, which seems to be a more convenient form. Over the past few years, users of these platforms have increasingly shifted to their smartphones, leading the industry to focus on mobile devices. Having computers at hand, social media users realise the benefits (e.g. for eye health) of using desktop computers over phone screens.

As a result of the pandemic, societies suddenly have become dependent on services that allow them to work and study at home. Applications used for remote work recorded a significant increase in popularity in the analysed period. The biggest change was observed in the case of Zoom, which has become the optimal solution for people looking for a platform for online meetings and webinars, even those combined with online broadcasts (Lowenthal et al., 2020).

People’s behaviour in social media in the era of coronavirus is changing incredibly quickly, along with the changing daily habits of their users. Changing patterns, focusing on remote work and school, changes in the use of basic devices, and activity limitations have significantly affected the way audiences interact with social media in just a few weeks. Coping with the highly dynamic change in the social media market requires constant and systematic observation and analysis. The changes, with different intensities, also took place at the level of individual sectors of the economy. Also, in the media market, COVID-19 has caused significant transformations, which are discussed in this article.

RESEARCH METHODOLOGY

The research in the area of methodology development, tool design, implementation of the adopted assumptions, and report preparation was carried out by the Polish Press Agency in Warsaw and a team of analysts from the Institute for Development of Information Society in Rzeszów. Research activities were carried out in May 2020 among 4,500 journalists listed in the Polish Press Agency databases. The result of the survey is 316 completed questionnaires. Assuming 95% confidence interval, the estimated maximum error was $e = 5.3\%$, with the following assumptions: confidence interval for the results $\alpha = 95\%$, fraction size, $f = 0.5$, N_{\min} - sample size, N_p - population size.

The research was carried out using the quantitative research method employing the CAWI technique (*Computer Assisted Web Interview*), which involves obtaining information from the respondent using an online questionnaire available in the form of a hyperlink. This technique is comfortable for the respondent and allows the use of the vast communication channels available to the Polish Press Agency. The conducted research was of a survey nature, where an important role was getting to know the opinions of large communities while checking the scope of given phenomena (Miotk, 2012). The questionnaire was developed using a pilot study, and then it was modified. To estimate the share of the variance of the accurate results versus the variance of the obtained results, the alpha reliability coefficient proposed by Cronbach (1971) was used (the obtained value was 0.79). The survey questionnaire consisted of thematic sections that concerned the work of journalists during the coronavirus pandemic, the evaluation of cooperation with PR specialists, the communication tools used, and the phenomenon of fake news. Moreover, the structure of questions was mainly based on ordinal scales, which allows for the standardisation of the respondents' answers. Additionally, at the ordinal level, analyses can be conducted according to the degree of intensity of a given feature (Szwed, 2009). As a result, the conducted research analyses are based on the frequency distributions and the procedure of comparing averages in individual independent groups. Correlation analysis was also used, based on the demonstration of statistically significant correlations using Spearman's rank-order correlation.

DATA ANALYSIS

The work of journalists in Poland in connection with the pandemic has changed quite significantly. This is evidenced by studies carried out during the pandemic. One of the areas examined was the issue of journalists' involvement in running their social media. Table 1 presents the distribution of responses of the surveyed journalists in terms of the correlation between the duration of the pandemic and increased social media involvement.

Table 1: Changes in using social media during the lockdown period (N = 316)

To what extent do you agree with the statement that due to the pandemic you have become more involved in running your social media?	Number of answers	Response rate
Definitely not	98	31.0
Rather not	104	32.9
Hard to say	19	6.0
Rather yes	53	16.8
Definitely yes	42	13.3
Total	316	100.0

Source: Table based on the author's research

The COVID-19 pandemic has prompted journalists to search for new methods and techniques of communication. Overnight, it became necessary to completely transfer the activities so far carried out in the formula of direct contact to the network. As shown from

the data presented in Table 1, almost every third respondent (30.1%) became more involved in running their social media accounts, including opening new communication channels and increasing their activity. Nevertheless, almost two-thirds of the respondents (63.9%) did not notice such a change.

Journalists had to find other means of communication as personal contacts were limited. Similar trends characterise the PR industry, which maintains constant relations with journalists. Research conducted among 242 PR specialists shows that during the pandemic, the demand for crisis management and digital PR has particularly increased (Tworzydło, 2020).

The research results presented in Table 1 constitute the point of consideration for this article. Situations in which the issue of engaging in social media, caused by the COVID-19 pandemic, have a significant impact on other aspects of journalistic work will be discussed in the following section. For greater transparency, the responses of the survey participants who are instead or definitely more involved in running social media have been combined into one variable. The same was done in the case of people rather or definitely not involved in such activities.

Changes in the journalist's work during the pandemic are also presented in the table below, confirming the need to perform tasks unrelated to the journalist's main specialisation (Table 2).

Table 2: Changes in the journalist's work in relation to the level of involvement in running social media (data in%)

		Due to the pandemic, I have become more involved in running my social media			Total
		No	Hard to say	Yes	
The situation forces me to write about areas in which I have not specialized before	Definitely not	22.3	10.5	11.6	18.4
	Rather not	40.6	10.5	29.5	35.4
	Hard to say	7.4	21.1	16.8	11.1
	Rather yes	21.8	42.1	31.6	25.9
	Definitely yes	7.9	15.8	10.5	9.2
Total		100.0	100.0	100.0	100.0

Chi-square = 23.253, Cramer's V = 0.192
 Source: Own development based on research

In the course of data analysis, a correlation was observed between the question regarding involvement in social media in the context of the fact that the pandemic forced journalists to write about areas in which they had not previously specialised. As can be seen from the data presented in Table 2, more than two-fifths of people who became more involved in running social media (42.1%) admitted that the situation rather or definitely forced them to cover areas in which they had not specialised before. In turn, among people not involved in running their social media, the percentage of such responses was 29.7%.

Moreover, Spearman's correlation proved that the more often, in connection with the pandemic, the surveyed journalists indicated becoming more involved in running social

media, the more often they were forced by the situation to relate to areas in which they did not specialise before ($\rho = 0.242$; $p = 0.000$).

The impact of the pandemic on journalists' work in Poland is also reflected in the positive correlation between the frequency of running new journalistic tools and the use of journalists' own social media profiles (Table 3).

Table 3: The implementation of new journalistic tools in relation to the level of involvement in running social media (data in %)

		Due to the pandemic, I have become more involved in running my social media			Total
		No	Hard to say	Yes	
Due to the pandemic, I started to use new journalistic tools, e.g. podcasts, video materials	Definitely not	37.1	10.5	7.4	26.6
	Rather not	35.6	21.1	15.8	28.8
	Hard to say	7.9	21.1	10.5	9.5
	Rather yes	13.4	36.8	38.9	22.5
	Definitely yes	5.9	10.5	27.4	12.7
Total		100.0	100.0	100.0	100.0

Chi-square = 80.248, Cramer's V = 0.356

Source: Own development based on research

Other analyses showed that two-thirds of the journalists participating in the survey (66.3%) started to engage on their social media profiles simultaneously rather or definitely began to use new journalistic tools, e.g. podcasts and video materials. A relatively high percentage confirms changes in the way journalists communicate during a pandemic. Among people not involved in running their social media, the percentage of such responses was only 19.3%. In connection with the above, the importance of digital communication for undertaking additional forms of online activity can be seen.

The applied Spearman's correlation analysis showed statistically significant relationships between the variables. With the increase of involvement in running one's social media increases, the involvement in new journalistic formats, e.g. podcasts and video materials is also growing ($\rho = 0.521$, $p = 0.000$).

Subsequent analyses allowed us to gather information on the reaction time in connection with the creation and dissemination of information by journalists in the era of the coronavirus pandemic (Table 4).

Table 4: Speed of articles/news development in relation to the level of involvement in running social media (data in%)

		Due to the pandemic, I have become more involved in running my social media			Total
		No	Hard to say	Yes	
The pandemic forces a faster than ever before response in the creation and distribution of articles/news	Definitely not	9.4	10.5	3.2	7.6
	Rather not	22.8	0.0	13.7	18.7
	Hard to say	16.3	10.5	11.6	14.6
	Rather yes	29.7	52.6	35.8	32.9
	Definitely yes	21.8	26.3	35.8	26.3
Total		100.0	100.0	100.0	100.0

Chi-square = 19.355, Cramer's V = 0.175

Source: Own development based on research

More than seven out of ten respondents (71.6%) who became more involved in running their social media profiles declared that the pandemic rather or definitely forces a faster reaction in creating and distributing articles. In the case of people not involved in such activities, the percentage of indications oscillated at the level of 51.5%.

The presented intergroup comparisons also turned out to be statistically significant. As shown by the analysis of Spearman's correlation, the more often the respondents declared involvement in running their social media, the more often they believed that the pandemic forced a faster than ever before reaction in creating and distributing articles/news ($\rho = 0.232$, $p = 0.000$).

Another important piece of information resulting from the study was noted in connection with the frequency of communication between the journalist and the sender of press releases in the context of journalists' activity in social media (Table 5).

Table 5: Communication with press releases senders in terms of the level of involvement in running social media (data in %)

		Due to the pandemic, I have become more involved in running my social media			Total
		No	Hard to say	Yes	
More often than before a pandemic, I have to communicate with the senders of press releases to obtain explanations and/or additional supplements	Definitely not	11.9	10.5	9.5	11.1
	rather not	54.0	36.8	42.1	49.4
	Hard to say	13.9	31.6	21.1	17.1
	Rather yes	17.8	15.8	21.1	18.7
	Definitely yes	2.5	5.3	6.3	3.8
Total		100.0	100.0	100.0	100.0

Chi-square = 10.340, Cramer's V = 0.128

Source: Own development based on research

More than one in four journalists surveyed in the research and involved in running social media (27.4%) admitted that they have to contact the senders of press releases and ask for explanations and/or additional supplements rather or definitely more often than before the pandemic. Among the respondents not involved in running their social media, the percentage of responses was 20.3%.

The differences in the respondents' answers were also significant from a statistical point of view. The performed calculations showed that with the increasing involvement in running one's own social media profiles, the frequency of contacts between the journalists participating in the survey and the senders of press releases ($\rho = 0.146$, $p = 0.009$) also increases.

Journalists were also asked to evaluate their relationship with PR specialists during the pandemic. The analysis of this issue provides interesting results in the context of the level of involvement in running social media.

Table 6: Journalists' cooperation with PR specialists in terms of the level of their involvement in running social media (data in %)

		Due to the pandemic, I have become more involved in running my social media			Total
		No	Hard to say	Yes	
Has your work with PR specialists become more difficult due to the coronavirus pandemic?	Definitely not	13.9	15.8	8.4	12.3
	Rather not	53.5	42.1	47.4	50.9
	Hard to say	19.8	36.8	28.4	23.4
	Rather yes	8.9	5.3	8.4	8.5
	Definitely yes	4.0	0.0	7.4	4.7
Total		100.0	100.0	100.0	100.0

Chi-square = 8.945, Cramer's V = 0.119

Source: Own development based on research

The issue that significantly differentiated the responses turned out to be the difficulty of work between journalists participating in the survey and public relations professionals. More than two-thirds of people not involved in running their social media admitted that they rather or definitely do not feel such difficulties in cooperation with PR specialists (67.4%). Among people involved in running their social media, the percentage of such responses oscillated around 55.8%.

The applied analysis of Spearman's correlation showed statistically significant relationships between the variables. Well, journalists who, due to the pandemic, began to become more involved in running their social media profiles significantly more often admitted that working with PR professionals became more difficult during the pandemic ($\rho = 0.121$, $p = 0.032$).

Slightly over 1/3 of the surveyed journalists (35.4%) have never used fact-checking websites, although the frequency of using tools that facilitate the verification of the reliability and truthfulness of information depends on the involvement of journalists in running their social media. Similar trends apply to the reporting of fake news on a dedicated website (Table 7-8).

Table 7: The frequency of using fact-checking websites in relation to the level of involvement in running social media (data in %)

		Due to the pandemic, I have become more involved in running my social media			Total
		No	Hard to say	Yes	
I am using fact-checking websites	Never	40.1	21.1	28.4	35.4
	Rarely	25.7	26.3	23.2	25.0
	Sometimes	18.8	21.1	26.3	21.2
	Often	9.9	15.8	15.8	12.0
	Very often	5.4	15.8	6.3	6.3
Total		100.0	100.0	100.0	100.0

Chi-square = 10.607, Cramer's V = 0.130
 Source: Own development based on research

Statistically significant relationships were also observed in questions concerning the use of fact-checking websites. The idea of fact-checking was born in the United States. In 1995, Snopes.com was created, one of the first sites of this type. At that time, the website was engaged in exploring urban legends and scams. Currently, it is an independent portal belonging to Snopes Media Group. Statistics on the number of fact-checking organisations are provided by "Duke reporters' Lab". According to their analyses, as of June 2017, there were 126 editorial offices in 49 countries worldwide.

The analyses carried out showed that over one-fifth of the respondents (22.1%) started to become more involved in running their social media due to the pandemic, often or very often using fact-checking websites. In the case of those not involved in running their social media, this percentage was relatively lower and amounted to 15.3%. The applied analysis of Spearman's correlation showed statistically significant relationships between the variables as people engage in running their social media, the frequency of using fact-checking sites increases ($\rho = 0.197$, $p = 0.000$).

Another question regarding the use of fact-checking sites was related to the issue of reporting fake news on such websites.

Table 8: The frequency of reporting fake news on fact-checking websites in relation to the level of involvement in running social media (data in %)

		Due to the pandemic, I have become more involved in running my social media			Total
		No	Hard to say	Yes	
I report fake news to fact-checking websites	Never	70.3	42.1	48.4	62.0
	Rarely	18.8	15.8	27.4	21.2
	Sometimes	6.9	15.8	12.6	9.2
	Often	1.0	21.1	5.3	3.5
	Very often	3.0	5.3	6.3	4.1
Total		100.0	100.0	100.0	100.0

Chi-square = 35.183, Cramer's V = 0.236
 Source: Own development based on research

It turns out that every ninth respondent who started to be more involved in running social media due to the pandemic reports fake news on fact-checking websites often or very often (11.6%). Among people involved in running their social media, only 4% of respondents practice fake news reporting often or very often.

Moreover, Spearman's correlation showed that the more often, in connection with the pandemic, the interviewed journalists indicated that they became involved in social media, the more often they reported fake news on fact-checking sites ($\rho = 0.260$; $p = 0.000$). This may prove the awareness of people who actively engage in social media activities, take advantage of technological achievements and modern communication solutions. These journalists not only know but also seek it, which improves their work and contributes to an increase in its quality.

The subject matter related to journalists' selection of communication tools aimed at the pandemic era constituted an important area of the study. It is worth paying attention to the trends regarding the basic tool, which is an electronic e-mail (Table 9).

Table 9: The use of e-mail communication between journalists and PR specialists in relation to the level of involvement in social media (data in %)

		Due to the pandemic, I have become more involved in running my social media			Total
		No	Hard to say	Yes	
What will be the lasting effects of the pandemic regarding the use of the following forms of communication between journalists and PR specialists: E-mail?	It will get smaller	1.0	0.0	0.0	0.6
	Remain unchanged	57.4	36.8	42.1	51.6
	It will increase	41.6	63.2	57.9	47.8
Total		100.0	100.0	100.0	100.0

Chi-square = 9.517, Cramer's V = 0.123

Source: Own development based on research

The last statistically significant correlation, the involvement of journalists in running social media and the expression of their opinion that the pandemic would have lasting effects on the use of selected forms of communication between journalists and PR specialists. As can be seen, 57.9% of journalists who started to become more involved in running their social media in connection with the pandemic turned out to believe that the permanent effect of the pandemic will be the increased use of emails during communication between journalists and PR professionals. Among people not involved in running their social media, the percentage of such responses was 41.6%.

The differences in the respondents' answers turned out to be statistically significant. Spearman's correlation analysis showed that the more often the respondents declared engaging in running their social media, the more often they believed that the frequency of using email as a form of communication between journalists and PR specialists would increase ($\rho = 0.146$, $p = 0.009$).

DISCUSSION AND CONCLUSIONS

Today more than ever, as the world faces a global health crisis, we need high-quality, properly delivered messages, to identify disinformation provide, reliable public health advice and build social solidarity. The unprecedented increase in news consumption reinforces the situation in which the public is being attacked from everywhere with a massive amount of news, which is largely untrue. Journalists publishing content in social media have been assigned a special mission, which boils down to promoting with much greater attention and commitment, meticulously verified, reliable information, and eliminating the so-called fake news. New technologies such as fact-checking websites help carry out this mission. According to the research, journalists who, due to the pandemic, started to become more involved in running their social media significantly more often use fact-checking websites and report materials classified as fake news. This is very positive information, as it proves the great awareness of people actively participating in social media.

The situation related to the COVID-19 pandemic has significantly changed the work of Polish journalists publishing their content on social media, which results directly from the significant changes that have affected this medium. With the outbreak of the pandemic, the number of users of the most popular social media platforms has increased considerably. The way of using social media has also changed significantly, as users started using them more often through stationary devices. Social media enables communication between users, especially video, and has gained popularity. There has been an increase in the importance of social media in building communities and interpersonal bonds. Local social media channels have gained importance.

The work of many Polish journalists publishing on social media has been relocated to home. Journalists working from home had to acquire managerial skills in a short time, which allowed them to work effectively. The scope of the journalists' toolbox has been expanded, especially with solutions related to new technologies. Journalistic tools such as videoconferences and podcasts are gaining in importance. The work of journalists in the era of a global pandemic requires quick action. Due to the huge demand for information, some journalists were forced to retrain and present content in areas they did not specialize before. The situation related to the pandemic to some extent increased the cooperation of journalists with PR specialists.

The results of the conducted research confirmed these words. The subsequent analyses showed that journalists who, due to the pandemic, started to become more involved in running their social media were significantly more often forced by the situation to cover areas in which they did not specialise before. They also began to engage in new journalistic formats, e.g. podcasts, video materials. The pandemic forces them to react faster and create and distribute articles/news quicker than ever. Besides, more often than before the pandemic, they have to contact the senders of press releases to obtain explanations and/or additional supplements, and at the same time, cooperation with PR specialists has become more difficult for them. Moreover, they were more likely to believe that due to the pandemic, the frequency of using email as a form of communication between journalists and PR specialists would increase.

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REFERENCES

- Aldwairi, M., & Alwahedi, A. (2018). Detecting fake news in social media networks. *Procedia Computer Science*, 141, 215-222. <https://doi.org/gg7z34>
- Appel, G., Grewal, L., Hadi, R., & Stephen, A. (2020). The future of social media in marketing. *Journal of the Academy of Marketing Science*, 48, 79-95. <https://doi.org/gghfx5>
- Baer, J. (2020). *Podcast statistics for 2020 - Charts and data*. <https://bit.ly/3nClT22>
- Bentley, J., Mohamed, F., Feeny, N., Ahmed, L., Musa, K., Tubeec, S., Angula, D., Egeh, M., & Zoellner, L. (2020). Local to global: Somali perspectives on faith, community, and resilience in response to COVID-19. *Psychological Trauma: Theory, Research, Practice, and Policy*, 12(S1), S261-S263. <https://doi.org/10.1037/tra0000854>
- Berger, G. (2020, April 13). During this coronavirus pandemic, “fake news” is putting lives at risk: UNESCO. *UN News*. <https://news.un.org/en/story/2020/04/1061592>
- Bernadas, J., & Ilagan, K. (2020). Journalism, public health, and COVID-19: Some preliminary insights from the Philippines. *Media International Australia*, 117(1), 132-138. <https://doi.org/10.1177/1329878X20953854>
- Buschman, J. (2019). Good news, bad news, and fake news: Going beyond political literacy to democracy and libraries. *Journal of Documentation*, 75(1), 213-228. <https://doi.org/10.1108/JD-05-2018-0074>
- Chan, A., Nickson, C. P., Rudolph, J. W., Lee, A., & Joynt, G. M. (2020). Social media for rapid knowledge dissemination: Early experience from the COVID-19 pandemic. *Anaesthesia*, 75(12), 1579-1582. <https://doi.org/10.1111/anae.15057>
- Cinelli, M., Quattrocioni, W., Galeazzi, A., Valensise, C., Brugnoli, E., Schmidt, A., Paola, Z., Fabiana, Z., & Scala, A. (2020). The COVID-19 social media infodemic. *Scientific Reports*, 10, 16598. <https://doi.org/10.1038/s41598-020-73510-5>
- Cronbach, L. J. (1971). Test validation. In R. Thorndike (Ed.), *Educational measurement*. Washington DC: American Council on Education.
- Depoux, A., Martin, S., Karafillakis, E., Preet, R., Wilder-Smith, A., & Larson, H. (2020). The pandemic of social media panic travels faster than the COVID-19 outbreak. *Journal of Travel Medicine*, 27(3). <https://doi.org/10.1093/itm/taaa031>
- Devereux, E., Grimmer, L., & Grimmer, M. (2020). Consumer engagement on social media: Evidence from small retailers. *Journal of Consumer Behavior*, 19(2), 151-159. <https://doi.org/10.1002/cb.1800>
- D’Urso, J. (2020). How the coronavirus pandemic is changing social media. *Reuters Institute for the Study of Journalism*. <https://bit.ly/33M7UFj>
- Ekström, M., Lewis, S., & Westlund, O. (2020). Epistemologies of digital journalism and the study of misinformation. *New Media and Society*, 22(2), 205-212. <https://doi.org/10.1177/1461444819856914>
- Fernandez, M., & Alani, H. (2018). Online misinformation: Challenges and future directions. *WWW '18: Companion Proceedings of the the Web Conference 2018* (pp. 595-602). <https://doi.org/10.1145/3184558.3188730>
- Fleming, N. (2020). Coronavirus misinformation, and how scientists can help to fight it. *Nature* 583(7814), 155-156. <https://doi.org/10.1038/d41586-020-01834-3>
- Flick, D. (2017). Combatting fake news: Alternatives to limiting social media misinformation and rehabilitating. *Quality Journalism, SMU Sci. & Tech. L. Rev.*, 375. <https://bit.ly/3dkLAWI>

- Frenkel, S., Alba, D., & Zhong, R. (2020). Surge of virus misinformation stumps Facebook and Twitter. *The New York Times*.
<https://www.nytimes.com/2020/03/08/technology/coronavirus-misinformation-social-media.html>
- Gao, J., Zheng, P., Jia, Y., Chen, H., Mao, Y., Chen, S., Wang, Y., Fu, H., & Dai, J. (2020). Mental health problems and social media exposure during COVID-19 outbreak. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3541120>
- Garrett, R. K., & Poulsen, S. (2019). Flagging Facebook falsehoods: Self-identified humor warnings outperform fact checker and peer warnings. *Journal of Computer-Mediated Communication*, 24(5), 240-258. <https://doi.org/10.1093/jcmc/zmz012>
- Gawroński, S. (2010). System kształcenia dziennikarzy w Polsce. Opinie i oczekiwania studentów. *Studia Medioznawcze Media Studies*, 4(43), 11-22.
https://studiamedioznawcze.pl/article.php?date=2010_4_43&content=gawronski&lang=pl
- Gawroński, S. (2013). *Pozabiznesowe obszary wykorzystania komunikacji makretingowej w warunkach polskich: Wybrane aspekty*. Warsaw: Aspra-JR.
- Gawroński, S. (2016). The world of journalism – The world of public relations assessment of changes in relations between journalists and PR managers in Poland. *Social Communication*, 2(1), 6-12. <https://doi.org/10.1515/sc-2016-0001>
- Gilead, M., Sela, M., & Maril, A. (2019). That's my truth: Evidence for involuntary opinion confirmation. *Social Psychological and Personality Science*, 10(3), 393-401.
<https://doi.org/10.1177/1948550618762300>
- Gough, A., Hunter, R., Ajao, O., Jurek, A., McKeown, G., Hong, J., Barrett, E., Ferguson, M., McElwee, G., McCarthy, M., & Kee, F. (2017). Tweet for behavior change: Using social media for the dissemination of public health messages. *MIR Public Health and Surveillance*, 3(1), e14. <https://doi.org/10.2196/publichealth.6313>
- Graves, L. (2016). *Deciding what's true: The rise of political fact-checking in American journalism*. New York: Columbia University Press. <https://doi.org/10.7312/grav17506>
- Graves, L., & Cherubini, F. (2016). *The rise of fact-checking sites in Europe*. Oxford: Reuters Institute for the Study of Journalism.
- Greenfield, G., Foley, K., & Majeed, A. (2016). Rethinking primary care's gatekeeper role. *BMJ*, 354, i4803. <https://doi.org/10.1136/bmj.i4803>
- Hampton, K. (2019). Social media and change in psychological distress over time: The role of social causation. *Journal of Computer-Mediated Communication*, 24(5), 205-222.
<https://doi.org/10.1093/jcmc/zmz010>
- Hao, K., & Basu, T. (2020, February 12). The coronavirus is the first true social-media "infodemic". *MIT Technology*.
<https://www.technologyreview.com/2020/02/12/844851/the-coronavirus-is-the-first-true-social-media-infodemic/>
- Kapoor, K., Tamilmanni, K., Rana, N., Patil, P., Dwivedi, Y., & Nerur, S. (2018). Advances in social media research: Past, present and future. *Information Systems Frontiers*, 20(3), 531-558. <https://doi.org/10.1007/s10796-017-9810-y>
- Kenney, M., & Zysman, J. (2020). COVID-19 and the increasing centrality and power of platforms in China, the USA, and beyond. *SSRN*. <https://doi.org/hnkc>
- Kent, M., & Li, Ch. (2020). Toward a normative social media theory for public relations. *Public Relations Review*, 46(1), 101857. <https://doi.org/10.1016/j.pubrev.2019.101857>

- Kiesow, D. (2020, March 19). Working from home in the age of pandemic. *Donald W. Reynolds Journalism Institute*. University of Missouri. <https://rjionline.org/news/working-from-home-in-the-age-of-pandemic/>
- Kietzmann, J., Hermkens, K., McCarthy, I., & Silvestre, B. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, 54(3), 241-251. <https://doi.org/10.1016/j.bushor.2011.01.005>
- Kim, E., Shepherd, M., & Clinton, J. (2020). The effect of big-city news on rural America during the COVID-19 pandemic. *Proceedings of the National Academy of Sciences*, 117(36), 22009-22014. <https://doi.org/10.1073/pnas.2009384117>
- Koeze, E., & Popper, N. (2020). The virus changed the way we Internet. *The New York Times*. <https://www.nytimes.com/interactive/2020/04/07/technology/coronavirus-internet-use.html>
- Land, Ch. (2020). Top 8 podcasting trends 2021 important for your show & revenue. *Improve Podcast*. <https://improvepodcast.com/top-podcasting-trends-market-ads-consumers-revenue/>
- Lee, S., Lindsey, N., & Kim, K. (2017). The effects of news consumption via social media and news information overload on perceptions of journalistic norms and practices. *Computers in Human Behavior*, 75, 254-263. <https://doi.org/gcx6h6>
- Lin, C.-Y., Broström, A., Griffiths, M., & Pakpour, A. (2020). Investigating mediated effects of fear of COVID-19 and COVID-19 misunderstanding in the association between problematic social media use, psychological distress, and insomnia. *Internet Interventions*, 21, 100345. <https://doi.org/10.1016/j.invent.2020.100345>
- Lowenthal, P., Borup, J., West, R., & Archambault, L. (2020). Thinking beyond Zoom: Using asynchronous video to maintain connection and engagement during the COVID-19 Pandemic. *Journal of Technology and Teacher Education*, 28(2), 383-391. <https://www.learntechlib.org/p/216192/>
- Malecki, K., Keating, J., & Safdar, N. (2020). Crisis communication and public perception of COVID-19 risk in the era of social media. *Clinical Infectious Diseases*, 72(4), 697-702. <https://doi.org/10.1093/cid/ciaa758>
- Merchant, R., & Lurie, N. (2020). Social media and emergency preparedness in response to novel Coronavirus. *JAMA*, 323(20), 2011-2012. <https://doi.org/ggg7bz>
- Miotk, A. (2012). *Public relations research*. Difin.
- Mirbabaie, M., Bunker, D., Stieglitz, S., Marx, J., & Ehnis, Ch. (2020). Social media in times of crisis: Learning from Hurricane Harvey for the coronavirus disease 2019 pandemic response. *Journal of Information Technology*, 35(3), 195-213. <https://doi.org/ghcps4>
- Momtaz, Y. (2020). The COVID-19 and ageism in social media. *Coronaviruses*, 1(1), 7-8. <https://doi.org/10.2174/2666796701999200621203144>
- Moore, R., Lee, A., Hancock, J., Halley, M., & Linos, E. (2020a). Experience with social distancing early in the COVID-19 pandemic in the United States: Implications for public health messaging. *MedRxiv: The Preprint Server for Health Sciences*, 2020.04.08.20057067. <https://doi.org/10.1101/2020.04.08.20057067>
- Moore, R., & Hancock, J. (2020b). Older adults, social technologies, and the Coronavirus pandemic: Challenges, strengths, and strategies for support. *Social Media + Society*, 6(3). <https://doi.org/10.1177/2056305120948162>

- Murray, S. (2020, March 16). How journalists are working together to cover the COVID-19 pandemic. *NiemanLab*. <https://www.niemanlab.org/2020/03/how-journalists-are-working-together-to-cover-the-covid-19-pandemic/>
- Muwahed, J. (2020). Coronavirus pandemic goes viral in the age of social media, sparking anxiety. *ABC News*. <https://abcnews.go.com/Politics/coronavirus-pandemic-viral-age-social-media-sparking-anxiety/story?id=69580796>
- Ong'ong'a, D., & Demuyakor, J. (2020). Coronavirus (COVID-19) "infodemic" in the Social Media: A Survey of Kenya International Students in China. *New Media and Mass Communication*, 90, 23-34. <https://doi.org/10.7176/nmmc/90-03>
- PAP Report: *Journalists in a pandemic: Online work, new technologies and fake news*. (2020). Polish Press Agency. <https://www.pap.pl/aktualnosci/news,672210,dziennikarze-w-czasie-pandemii-praca-online-nowe-technologie-i-fake-newsy>
- PAP Report: *Journalist's work during coronavirus and lockdown*. (2020). Polish Press Agency and Information Society Development Institute. <https://branden.biz/wp-content/uploads/2020/07/Raport-Praca-dziennikarza-w-czasie-koronawirusa-i-lockdown-PAP.pdf>
- Pennycook, G., McPhetres, J., Zhang, Y., Lu, J., & Rand, D. (2020). Fighting COVID-19 misinformation on social media: Experimental evidence for a scalable accuracy-nudge intervention. *Psychological Science*, 31(7), 770-780. <https://doi.org/gg5gxp>
- Pickard, V. (2020). *Democracy without Journalism?*. New York: Oxford University Press.
- Pingree, R., Watson, B., Sui, M., Searles, K., Kalmoe, N., Darr, J., Santia, M., & Bryanov, K. (2018). Checking facts and fighting back: Why journalists should defend their profession. *PLOS ONE*, 13(12). <https://doi.org/10.1371/journal.pone.0208600>
- Radcliffe, D. (2020). Supporting local journalism in the age of Covid-19. *European Journalism Observatory*. <https://en.ejo.ch/media-economics/supporting-local-journalism-in-the-age-of-covid-19>
- Radu, R. (2020). Fighting the "Infodemic": Legal responses to COVID-19 disinformation. *Social Media + Society*, 6(3). <https://doi.org/10.1177/2056305120948190>
- Sahni, H., & Sharma, H. (2020). Role of social media during the COVID-19 pandemic: Beneficial, destructive, or reconstructive?. *International Journal of Academic Medicine*, 6(2), 70-75.
- Sudhaman, A. (2020). "PR's moment to shine": Creativity in the Covid-19 era. *PRovoke Media*. <https://www.provokemedia.com/long-reads/article/'pr-s-moment-to-shine'-creativity-in-the-covid-19-era>
- Szwed, R. (2009). *Statistical methods in social sciences*. KUL Publishing House.
- Trullols, R. L. (2020). Coronavirus disinformation: EU warning over wave of fake COVID-19 claims on social media. *Euro News*. <https://www.euronews.com/my-europe/2020/06/10/coronavirus-disinformation-eu-warning-over-wave-of-fake-covid-19-claims-on-social-media>
- Tworzydło, D. (2020). Report: Growing demand for crisis management and digital PR after the pandemic. *PR Manager*. <https://www.pr-manager.pl/artukul/raport-wzrost-zapotrzebowania-na-zarzadzanie-kryzysowe-i-digital-pr-po-pandemii>
- Tworzydło, D., Gawroński, S., & Szuba, P. (2020). Importance and role of CSR and stakeholder engagement strategy in Polish companies in the context of activities of experts handling public relations. *Corporate Social Responsibility and Environmental Management*, 28(1), 64-70.

- Westlund, O., & Hermida, A. (2020). Data journalism and misinformation. In Tumber, H., & Waisbord, S. (Eds.), *Handbook on media misinformation and populism*. London: Routledge.
- White, D. (1950). The "gate keeper": A case study in the selection of news. *Journalism Quarterly*, 27(4), 383-390. <https://doi.org/10.1177/107769905002700403>
- Windelspecht, D. (2020, July 21). Tips for early-career journalists during the pandemic. *International Journalists' Network*.
<https://ijnet.org/en/story/tips-early-career-journalists-during-pandemic>
- Zhang, C., Fan, Ch., Yao, W., Hu, X., & Mostafavi, A. (2019). Social media for intelligent public information and warning in disasters: An interdisciplinary review. *International Journal of Information Management*, 49, 190-207. <https://doi.org/gh6vc9>