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Article:	When Fear Leads Towards Preventive Measures: A Study of Newspapers' Coverage and Public Perception on COVID-19 Pandemic
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Abstract

This research intends to examine and analyze the coverage of COVID-19 pandemic in leading Urdu newspapers of Pakistan and its effects on readers. For this purpose, this study applied quantitative content analysis and survey method. News stories (n=690) of COVID-19 were selected randomly from two newspapers, daily Jang and daily Express to find out the elements of fear, hope, awareness and precautions, while news readers and viewers were selected as respondents (n=455) to know the fear level and preventive measures taken by the news audience. The results found that newspapers paid attention to the crisis in terms of risk perception, and public opted preventive measures after news exposure. Survey result shows that television viewers have greater fear of COVID-19 than the social media users and newspapers readers. It further shows that females have more fear of COVID-19 than males, and they are taking more precautionary measures. Moreover, result shows that fear of COVID-19 is a significant predictor of precautionary behaviour for males than females. Limitations and future directions are discussed in details.

Keywords: News media, Newspapers, COVID-19, Fear, Preventive measures.

Introduction

In the recent pandemic of COVID-19, mass media is playing industrious role globally. Media organizations and persons are working constantly in providing health crisis information and to create awareness to stop the deadly disease outbreak (Boberg et al., 2020). It is noted that as day by day global pandemic increased in its intensity, media outlets augmented their efforts to communicate its threat and for the cognizance of protective measures as well (Thomas et al., 2020). Media perform reporting as a social responsibility and provide information in an explicit and understandable manner (Mejia et al., 2020). That is why in the digitalized millennium, people still depend on the traditional medium, television and newspapers, for health crisis information (Tejedor et al., 2020; Rossmann et al., 2018), and media always apprise the world community profoundly about ongoing situations with accurate and authentic facts and figures and experts' opinions (Husemann & Fischer, 2015).

Daily routines of the public are mostly influenced by media logics (Altheide, 2013); particularly inhabitants of urban areas largely depend upon mass media to acquire knowledge about the disease, health, and scientific issues (Ophir, 2018). Research studies conducted after earlier pandemics of 21st century, SARS 2003, H1N1 influenza 2009, and MERS 2012 have proved this penetrated role of media during health crisis (Anwar et al., 2020). These showed that daily revelation and deliberate use of media facilitate the public with constructive health information (Lin et al., 2014) and (1) *provide information about risks, symptoms, or treatment of a disease*; (2) *enable the public to evaluate risks and deal with the threats*; and (3) *encourage the public to take appropriate precautions* (Rossmann et al., 2018, p. 358). During pandemics, through persuasive communication, mainstream media advise public to respond properly to virus-related information (Lee, 2014), and infuse the perceptions of risk among the audiences (Mandeville et al., 2014) with the quality and accuracy of the information. However, it is found that the elements of uncertainty like numbers of increasing patients and death toll escalate public fear (Lopes et al., 2012).

No doubt, the basic function of media is to mobilize knowledge with information, signs and language tone (Altheide, 2013), but in some extent, depending on the issue, the tendency of mediated script and representation of risk information spread fear (Lopes et al., 2012; Smith et al., 2013). Elements of fear are mostly found in headlines and sub-headlines (Altheide & Michalowski, 1999). These news stories on health issues are positively related to the spread of fear because readers talk with others regarding the emerging issue and they react according to their exposure and experience (Nazione et al., 2021). In some studies, it was discussed that media reports on pandemics, SARS and Avian Flu, overstated health issues with grave and emotional language to increase fear (Kato & Ishikawa, 2016; Vasterman & Ruigrok, 2013). However, it is evident that individual comprehend news according to his cognition and exposure (Lee, 2014) and abnormal situations induce fear among the folks (Ahorsu et al., 2020).

On the other side, these health news stories educate and aware public about the infectious diseases and motivate them to take precautionary measures promptly (Van den Broucke, 2020), which helps to lessening the infection (Zhao et al., 2020). In the starting period of every pandemic, people don't aware of the disease's vulnerability that is why they don't accept the protective measures. But when they were advised for protective measures to avoid any infection, they adopt it due to the perceived risk of virus (van der Weerd et al., 2017). Dependency on media in a health crisis for latest information help the public to change their behavior (Bults et al., 2011). Further, more attention to media reporting increase the perceived knowledge (Zhang et al., 2015) and convince people to adopt protective measures (Shultz et al., 2016). It is evident that most of the time fear call-in health crisis messages brought change in people's behavior and attitude. Previous research endorse that during 2009

H1N1 influenza pandemic, media has created great fear as well as awareness, and resultantly, preventive measures were taken by the public generally (Anwar et al., 2020).

It is compulsory for the public health that awareness about health crisis and preventive measures reached to the public accurately and timely (De Coninck et al., 2020). People take news messages on serious note and recognize threats of pandemic harmful and potential risks, not only for themselves but for their family as well (Paek et al., 2016). In recent scenario of COVID-19, mediated information is playing significant role. People are searching and sharing related information which is contributing greatly to risk perception (Lanciano et al., 2020) and this escalation leads towards preventive measures. The purpose of this research is to analyze the coverage of COVID-19 news in national press of Pakistan to find out its extent and its effects among the masses regarding fear and precautionary measures.

Method

Study 1

This study has used two research method for data collection. We used the quantitative content analysis to study the ongoing coverage of COVID-19 in Pakistan newspapers. For content analysis, two widely circulated Urdu newspapers (Jang and Express News) were taken to study the COVID-19 coverage during an early four-month period (20th March to 20th June 2020).

Total 690 news stories related to COVID-19 selected from electronic website database of these two newspapers Jang and Express. The news selected from the front and back pages of each 5th day of newspapers and it includes all local, national, international, social economic and political news stories. Quantitative content analysis is a useful technique to assess that how far these two-newspaper set the agenda in creating panic, awareness, hope and education among public in their reporting of public health crisis.

Unit of analysis

The unit of analysis for this study were news stories related to COVID-19. Only front-and back-page stories were included in the study.

Intercoder Reliability

The study has used two coders to ensure the intercoder reliability. Both the students were belonged to University of Management and Technology. First the coders were briefed about the study and then they were trained about the coding sheet. Reliability test was performed on 20% sampled data. Cohen's Kappa test of intercoder reliability was used and the result yielded a score of 0.93 for theme identified factors and 0.83 for word count.

Data analysis

SPSS version 25 was used to perform the descriptive and inferential analysis. First, frequency and percentages were used and then chi-square test was used for content analysis.

Study 2

On the other hand, we also conducted a survey on how news coverage affects the people precautionary behaviour. The survey technique was used to measure the relationship between perceived fear from media and precautionary measures taken after the fear of COVID-19. A sample of 454 respondents were selected through the purposive sampling. A link of online questionnaire was created and circulated among the respondents.

Measures

Media exposure

To measure the media exposure a scale was adopted from the Melki et al. (2020) study. The scale has used the exposure of social media and television. We also added a question related to the newspaper in the media exposure.

Fear of COVID-19

This scale was adopted from the Giordani et al. (2020) and Ahorsu et al. (2020) study. The scale consist of seven items and all the questions were measured on 5-point Likert scale. The reliability of the scale was checked through Macdonald omega and the value was $\omega=.87$.

Preventive Behavior

This scale was adopted from different studies (Melki et al. (2020) study). The scale consist of 10 items and all the questions were measured on 5-point Likert scale. The reliability of the scale was checked through Macdonald omega and the value was $\omega=.75$.

Data Analysis

SPSS was used to analyze the data. Independent sample t-test, one-way ANOVA and simple linear regression was used to analyze the data.

Results

Study 1

During the review of topic of Pandemic, the threat of Novel Corona Virus (COVID-19) appeared prominently among the two-national newspapers with a total of 694 news stories published between 20th March, 2020, to 20th June, 2020. Table 1 shows that Daily Jang published total 374 (53.8%) and Daily Express 320 (46.1%). The results indicate that Daily Jang showed more interest in covering the COVID-19 news than the Daily Express.

Table 1. Number of News stories on COVID-19 Pandemic by Two Newspapers

Each newspaper published four to five Lead news and 15-20 located in different column news stories in front and back pages according to its prominence and importance. However, fluctuations in the news stories appeared in both newspaper reporting. The collection of the news stories provides a clear evidence that both newspapers have equality in frequency at which they published the health crisis news.

Table 2 shows that both newspapers have same participation in facilitating information to its reader in first view on front page as Daily Jang report 166 and daily Express 167 news stories in different types of news. However slightly difference was shown in Box news. Daily Jang published 51 box news and Daily Express published only 15 box news.

On the back page we found that Daily Jang published 208 news stories and Daily

Newspaper	Frequency	Percentage
Daily Jang	374	53.8%
Daily Express	320	46.1%
Total	694	100%

Express published 153 news. Moreover, Daily Jang focused more on one column news (113) rather than two columns (23) and three columns (72). On the other hand, Daily Express gave more emphasis to two columns news (85) on back page rather than one column (49) and two columns (19).

Table 2. Story Type in Daily Jang and Daily Express

Story type	Daily Jang		Daily Express		Total
	Front	Back	Front	Back	
Lead story	11	--	14	--	25
Super lead	10	--	08	--	18
Box news	51	--	15	--	66
Three Columns	28	23	55	19	125

Two Columns	40	72	39	85	236
One Column	26	113	36	49	224
Total	166	208	167	153	694

The first news story published on 29 February 2020 in both newspaper with banner headline and from 29 Feb to 19 March both newspapers did not give much coverage to pandemic as they published 5-7 news stories as whole. Soon, the intensity of disease increased and more than of 400 cases were reported. Both newspapers published corona related news as priority and their front and back pages fully covered the health-related news included symptoms, fear, hope, awareness, and precautionary measures. To analyse the news stories, we designed a coding sheet of each newspaper and identify four factors fear, hope, awareness, and preventive measures.

Table 3. Factors Identified in Daily Jang and Daily Express

Identified factors	Daily Jang	Daily Express	Total
Fear	238 (70%)	204 (68.2%)	442 (69.1%)
Hope	37 (10.8%)	25 (8.4%)	62 (9.7%)
Awareness	06 (1.7%)	08 (2.6%)	14 (2.1%)
Preventive measures	59 (17.3%)	62 (20.7%)	123 (19.2%)
Total	340	299	639

Table 3 shows that both dailies gave more coverage to fear as Daily Jang published 238 (70 %) news and daily Express published 204 (68.2 %). While providing information about hope, Daily Jang published 37 (10.8 %) and Express published 25 (8.4 %). While awareness stories were 6 (1.7%) in Jang and 8(8.4%) in Express which indicates that both newspapers did not give much importance to awareness about corona to their readers.

Meanwhile both newspaper coverage on precautionary measures shows that at least they let the reader to protect themselves from infection by reporting 59 (17.3%) news in Jang and 62 (20.3%) in Express. Aggregate percentages in both newspapers are almost same with little difference but the text and words of the news stories clearly indicate the actual difference in them.

Table 4 showed that Daily Jang published 209 (63.7 %) Corona word related news as compared to Daily Express who reported it 172 (59.3 %) times. In reporting death rates newspapers gave almost same space to corona deaths updates. As Jang gave coverage in 29 (8.8 %) times as compared to Daily Express 32 (11 %). Apart from panic news stories like Corona and deaths, both newspapers have same ratio in the coverage of recovered patients from Corona. Both newspapers reported 10, 10 news stories which clearly shows that during pandemic each newspaper focused on health-related issues rather than other news. We also found that news stories which were talking about helping the needy and deserving people and funds (Ehasas cash programs), Daily Jang reported 14 (4.2 %) news as compared to Daily Express 7 (2.7 %).

As the corona cases increased the scientist quest for new vaccine got more attention. New vaccine hydroxychloroquine and erythromycin discovery brought new hope for the doctors and the people. At that time both newspapers played their role effectively in informing the public about vaccine in news stories. Jang published 8 stories and express published 7 stories with same ratio of 2.4% within each newspaper

Table 4 : Selected Words for Identifying Factors in Both Daily Newspapers

Word category	Daily Jang	Daily Express	Total
Corona	209 (63.7%)	172 (59.3%)	381
Death	29 (8.8%)	32(11%)	61
Recovered	10 (3%)	10(3.4%)	20
Funds	14 (4.2%)	08(2.7%)	22
Vaccines	08(2.4%)	07(2.4%)	15
lockdown	40 (12%)	33(11.3%)	73
Protection	18 (5.4%)	28(9.6%)	46
Total	328	290	618

Although vaccine experiment gave contentment to people but not enough to relax and carefree from Corona virus. Government took the precautionary measures to reduce the increasing number of cases by imposing smart, partial, or full lockdown in the most infected areas. In this case, Daily Jang reported this lock down with 40 (12%) news stories and express published 33 (11%) news stories.

Study 2

Table 5 shows the demographic characteristics of the participants. The sample included 253 (55.6 %) males and 202 (44.4 %) females. Most of the participants hold the BS/bachelor's degree 222 (48.8 %), 116 (25.5) hold the masters while remaining 117 (25.7 %) have MS/MPhil degree. Majority of the participants 235 (51.6) were between the age of 21-25 while only 25 (5.5 %) participants were above the age of 41.

Table 5. Demographic Characteristics

Demographic	Frequency	Percentage
Gender		
Male	253	55.6
Female	202	44.4
Education		
BS/Bachelor	222	48.8
Master	116	25.5
MS/MPhil	117	25.7
Age		
21-25	235	51.6
26-30	139	30.5
31-35	34	7.5
36-40	22	4.8
41+	25	5.5

Table 6 shows that One way ANOVA was performed to measure the differences in fear of COVID-19 among newspaper, TV, and social media users. The results show that there is significant difference exist regarding fear of COVID-19 [$F(2,452)=3.55$, $p<.05$] and precautionary measures among three group [$F(2,452)=4.70$, $p<.01$]. Moreover, Television viewers have greater fear of COVID-19 than the social media users and newspapers readers. In addition to this, television viewers have greater fear of COVID-19 than the social media users and newspapers readers. Thus, our H1 and H2 were supported.

Table 6. One-Way Analyses of Variance in Fear of COVID-19 and Precautionary Measures

Measure	Newspaper		Television		Social Media		F(2, 452)	η^2
	M	SD	M	SD	M	SD		
Fear of COVID-19	2.75	0.52	2.78	0.70	2.61	0.63	3.55*	0.12
Precautionary Measures	2.63	0.71	2.99	0.72	2.69	0.78	4.70**	0.15

** $p < .01$, * $p < .05$

In table 7, an independent sample t-test was used to check the difference regarding fear of COVID-19 and precautionary measures between males and females. The result shows that there is significant difference in fear of COVID-19 between males and females. In addition to this, significant difference found regarding precautionary measures between males and females. The result shows that females have more fear of COVID-19 than males. Similarly, females are taking more precautionary measures than males. Thus, our H3 and H4 were supported.

Table 7. Independent sample T-test in Fear of COVID-19 and Precautionary Measures

Measure	Male		Female		t(453)	p	Cohen's d
	M	SD	M	SD			
Fear from COVID-19	2.62	0.64	2.73	0.57	-1.89	.001	0.102
Precautionary Measures	2.59	0.76	2.85	0.75	-3.78	.001	0.124

Simple linear regression was used to predict the precautionary measures with the help of fear of COVID-19 perceived from media. The result shows that fear of COVID-19 is a significant predictor of precautionary behaviour [$\beta=.362$, $p<.05$] for males and for females [$\beta=.219$, $p<.05$]. The beta value was greater for males than the female respondents. Thus, our H5 was supported.

Discussion

The purpose of the study was to examine the coverage of COVID-19 in two Pakistan national newspapers. The study found that Jang newspaper published more news stories regarding COVID-19 than the Daily Express. The results showed that there were less news stories at the start of pandemic and with the increased cases more stories were published on the Corona Virus cases. These findings are contrary to the previous research which was conducted on media coverage of Dutch influenza of 2009 (Vasterman & Ruigrok, 2013). The Dutch media paid more attention at the start. Less lead stories were published on front page regarding COVID-19 in both newspapers. These findings are consistent with previous studies (de Veen & Thomas, 2020; Smith & Smith, 2016). Both dailies gave more coverage to fear as Daily Jang published more news than daily Express. Previous studies show that media highlight certain part of an issue (Gever, 2019). While providing information about hope, Daily Jang published more stories than Express. Awareness stories got similar attention in Jang and Express daily which indicates that both newspapers did not give much importance to awareness about corona to their readers. Meanwhile, both newspaper coverage on precautionary measures shows that express paid more attention towards precautions than Jang. These results are consistent with the previous studies that media play a major role during public health crisis and create awareness in the public about the precautionary measures (Allan, 2002; Reynolds & Quinn, 2008; Zhang et al., 2015).

Daily Jang published more Corona word related news as compared to Daily Express. In reporting death rates both newspapers gave almost same space to corona deaths updates. Apart from panic news stories like Corona and deaths, both newspapers have same ratio in

the coverage of recovered patients from Corona. We also found that news stories which were talking about helping the needy and deserving people and funds (Ehasas cash programs) were reported more in Daily Jang as compared to Daily Express.

Survey result shows that television viewers have greater fear of COVID-19 than the social media users and newspapers readers. In addition to this, television viewers have greater fear of COVID-19 than the social media users and newspapers readers. These results are in consistent with the previous findings that people depend more on television during crisis (Holland et al., 2014; Melki & Kozman, 2019; Melki et al., 2020). The result shows that there is difference in fear of COVID-19 between males and females. In addition to this, difference found regarding precautionary measures between males and females. The result shows that females have more fear of COVID-19 than males. Similarly, females are taking more precautionary measures than males. Previous studies have also found that men are more prone towards mortality due to different factors such as lifestyle and economic reasons (Bwire, 2020; Jin et al., 2020). Moreover, men show less fear towards public health crisis because they have to run the matters of family. Sometimes, men suppress feelings of fear due to their culture (Melki et al., 2020). The result shows that fear of COVID-19 is a significant predictor of precautionary behaviour for males than females.

Conclusion

On the basis of findings, we conclude that major newspapers of Pakistan paid attention towards public health crisis. However, most of the stories were not published at the start of crisis and stories lacks the depth. Moreover, the news stories were based on actions of government and different health official's description of the situation. Later, media used the NCOC (National Command Operation Center) as a source for COVID-19 related news and published their head/chairman remarks. In start news also focused on the available facilities in hospital and emphasized on the new hospitals or COVID-19 centres. Though, news related to awareness and precautions were published but they could not play an effective role in educating the public about public health crisis. Better results could have been achieved if media has paid more attention towards the precautionary measures at the start of the pandemic.

There are some limitations in the study. First, this study used the cross-sectional data and result of this study cannot be generalize to the whole population of Pakistan. Moreover, only two newspapers data included in the study. Future studies can add more national newspapers in their study to see the difference in their reporting. Moreover, an English and Urdu newspaper comparison can be performed to examine who paid more attention to public health crisis at the start. In addition to this, role of radio was not included in the study. Future studies can add radio as a source of information. The sample consist of Lahore residents and rural areas were not included in the study. Future studies can also increase the time frame for content analysis to see how newspapers have covered the crisis in a complete year.

References

- Ahorsu, D. K., Lin, C. Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The fear of COVID-19 scale: development and initial validation. *International journal of mental health and addiction*, 1-9.
- Allan, S. (2002). *Media, risk and science*. Open University Press.
- Altheide, D. L. (2013). Media logic, social control, and fear. *Communication Theory*, 23(3), 223-238.
- Altheide, D. L., & Michalowski, R. S. (1999). Fear in the news: A discourse of control. *Sociological Quarterly*, 40(3), 475-503.
- Anwar, A., Malik, M., Raees, V., & Anwar, A. (2020). Role of mass media and public health communications in the COVID-19 pandemic. *Cureus*, 12(9).
- Bjørkdahl, K., & Carlsen, B. (2017). Fear of the fear of the flu: Assumptions about media effects in the 2009 pandemic. *Science communication*, 39(3), 358-381.
- Boberg, S., Quandt, T., Schatto-Eckrodt, T., & Frischlich, L. (2020). *Pandemic populism: Facebook pages of alternative news media and the corona crisis--A computational content analysis*. (MOR Working Paper 1/2020). Muenster Online Research. <https://arxiv.org/pdf/2004.02566.pdf>
- Bults, M., Beaujean, D. J., de Zwart, O., Kok, G., van Empelen, P., van Steenbergen, J. E., & Voeten, H. A. (2011). Perceived risk, anxiety, and behavioural responses of the general public during the early phase of the Influenza A (H1N1) pandemic in the Netherlands: results of three consecutive online surveys. *BMC public health*, 11(1), 1-13.
- Bwire, G. M. (2020). Coronavirus: Why men are more vulnerable to COVID-19 than women? *SN Comprehensive Clinical Medicine*, 2(7), 874-876. <https://doi.org/10.1007/s42399-020-00341-w>
- De Coninck, D., d'Haenens, L., & Matthijs, K. (2020). Forgotten key players in public health: news media as agents of information and persuasion during the COVID-19 pandemic. *Public Health*, 183, 65.
- de Veen, L., & Thomas, R. (2020). Shooting for neutrality? Analysing bias in terrorism reports in Dutch newspapers. *Media, War & Conflict*. <https://doi.org/10.1177/1750635220909407>
- Gever, C. V. (2019). When solution triggers more conflicts: frames and tone of media coverage of the anti-open grazing law of Benue State, Nigeria. *Media, War & Conflict*, 12(4), 468-482.
- Giordani, R. C. F., Zanoni da Silva, M., Muhl, C., & Giolo, S. R. (2020). Fear of COVID-19 scale: Assessing fear of the coronavirus pandemic in Brazil. *Journal of Health Psychology*. <https://doi.org/10.1177/1359105320982035>.
- Holland, K., Sweet, M., Blood, R. W., & Fogarty, A. (2014). A legacy of the swine flu global pandemic: Journalists, expert sources, and conflicts of interest. *Journalism*, 15(1), 53-71.
- Husemann, S., & Fischer, F. (2015). Content analysis of press coverage during the H1N1 influenza pandemic in Germany 2009-2010. *BMC Public Health*, 15(1), 1-9.
- Jin, J. M., Bai, P., He, W., Wu, F., Liu, X. F., Han, D. M., Liu, S., & Yang, J. K. (2020). Gender differences in patients with COVID-19: focus on severity and mortality. *Frontiers in public health*, 8, 152.
- Kato, M., & Ishikawa, H. (2016). Media Coverage of a global pandemic in Japan: content analysis of A/H1N1 influenza newspaper articles. *Journal of Mass Communication & Journalism*, 6(10.4172), 2165-7912.

- Lanciano, T., Graziano, G., Curci, A., Costadura, S., & Monaco, A. (2020). Risk perceptions and psychological effects during the Italian COVID-19 emergency. *Frontiers in psychology, 11*, 2434.
- Lee, S. T. (2014). Predictors of H1N1 influenza pandemic news coverage: explicating the relationships between framing and news release selection. *International Journal of Strategic Communication, 8*(4), 294-310.
- Lin, L., Jung, M., McCloud, R. F., & Viswanath, K. (2014). Media use and communication inequalities in a public health emergency: a case study of 2009–2010 pandemic influenza A virus subtype H1N1. *Public health reports, 129*(6_suppl4), 49-60.
- Lopes, F., Ruão, T., Marinho, S., & Araújo, R. (2012). A media pandemic: influenza A in Portuguese newspapers. *International Journal of Healthcare Management, 5*(1), 19-27.
- Mandeville, K. L., O'Neill, S., Brighouse, A., Walker, A., Yarrow, K., & Chan, K. (2014). Academics and competing interests in H1N1 influenza media reporting. *Journal of Epidemiology & Community Health, 68*(3), 197-203.
- Mejia, C. R., Ticona, D., Rodriguez-Alarcon, J. F., Campos-Urbina, A. M., Catay-Medina, J. B., Porta-Quinto, T., Garayar-Peceros, H., Ignacio-Quinte, C., Esteban, R. F. C., Mamani P. G. R., & Tovani-Palone, M. R. (2020). The Media and their Informative Role in the Face of the Coronavirus Disease 2019 (COVID-19): Validation of Fear Perception and Magnitude of the Issue (MED-COVID-19). *Electronic Journal of General Medicine, 2020*; 17 (6): em239. <https://doi.org/10.29333/ejgm/7946>
- Melki, J., & Kozman, C. (2019). Media dependency, selective exposure and trust during war: Media sources and information needs of displaced and non-displaced Syrians. *Media, War & Conflict*. <https://doi.org/10.1177/1750635219861907>
- Melki, J., Tamim, H., Hadid, D., Farhat, S., Makki, M., Ghandour, L., & Hitti, E. (2020). Media Exposure and Health Behavior during Pandemics: The Mediating Effect of Perceived Knowledge and Fear on Compliance with COVID-19 Prevention Measures. *Health Communication, 1-11*. DOI: [10.1080/10410236.2020.1858564](https://doi.org/10.1080/10410236.2020.1858564)
- Nazione, S., Perrault, E., & Pace, K. (2021). Impact of Information Exposure on Perceived Risk, Efficacy, and Preventative Behaviors at the Beginning of the COVID-19 Pandemic in the United States. *Health Communication, 36*(1), 23-31.
- Ophir, Y. (2018). Spreading News: The Coverage Of Epidemics By American Newspapers And Its Effects On Audiences-A Crisis Communication Approach.
- Davis, J. (2015). *A tale of two landscapes: Examining alienation and non-visitation among local African American fishers at Congaree National Park* [Doctoral dissertation, University of Pennsylvania]. Scholarly Commons. <https://repository.upenn.edu/edissertations/2787>
- Paek, H. J., Oh, S. H., & Hove, T. (2016). How fear-arousing news messages affect risk perceptions and intention to talk about risk. *Health communication, 31*(9), 1051-1062.
- Reynolds, B., & Quinn, S. C. (2008). Effective communication during an influenza pandemic: The value of using a crisis and emergency risk communication framework. *Health Promotion Practice, 9*(4), 13S–17S. <https://doi.org/10.1177/1524839908325267>
- Rossmann, C., Meyer, L., & Schulz, P. J. (2018). The mediated amplification of a crisis: Communicating the A/H1N1 pandemic in press releases and press coverage in Europe. *Risk analysis, 38*(2), 357-375.
- Shultz, J. M., Cooper, J. L., Baingana, F., Oquendo, M. A., Espinel, Z., Althouse, B. M., Marcelin, L. H., Towers, S., Espinola, M., McCoy, C. B., Mazurik, L., Wainberg, M. L., Neria, Y., & Rechkemmer, A. (2016). The Role of Fear-Related Behaviors in the

- 2013-2016 West Africa Ebola Virus Disease Outbreak. *Current psychiatry reports*, 18(11), 104. <https://doi.org/10.1007/s11920-016-0741-y>
- Smith, K. C., Rimal, R. N., Sandberg, H., Storey, J. D., Lagasse, L., Maulsby, C., Rhoades, E., Barnett, D. J., Omer, S. B., & Links, J. M. (2013). Understanding newsworthiness of an emerging pandemic: International newspaper coverage of the H1N1 outbreak. *Influenza and other respiratory viruses*, 7(5), 847-853.
- Smith, S., & Smith, S. (2016). Media coverage of the Ebola virus disease in four widely circulated Nigerian newspapers: lessons from Nigeria. *Health promotion perspectives*, 6(2), 92-95.
- Tejedor, S., Cervi, L., Tusa, F., Portales, M., & Zabolina, M. (2020). Information on the COVID-19 pandemic in daily newspapers' front pages: case study of Spain and Italy. *International journal of environmental research and public health*, 17(17), 6330.
- Thomas, T., Wilson, A., Tonkin, E., Miller, E. R., & Ward, P. R. (2020). How the media places responsibility for the COVID-19 pandemic—An Australian media analysis. *Frontiers in public health*, 8, 483.
- Van den Broucke S. (2020). Why health promotion matters to the COVID-19 pandemic, and vice versa. *Health promotion international*, 35(2), 181–186. <https://doi.org/10.1093/heapro/daaa042>
- van der Weerd, W., Timmermans, D. R., Beaujean, D. J., Oudhoff, J., & van Steenberg, J. E. (2011). Monitoring the level of government trust, risk perception and intention of the general public to adopt protective measures during the influenza A (H1N1) pandemic in the Netherlands. *BMC public health*, 11(1), 1-12.
- Vasterman, P. L., & Ruigrok, N. (2013). Pandemic alarm in the Dutch media: Media coverage of the 2009 influenza A (H1N1) pandemic and the role of the expert sources. *European journal of communication*, 28(4), 436-453.
- Zhang, L., Kong, Y., & Chang, H. (2015). Media use and health behavior in H1N1 flu crisis: The mediating role of perceived knowledge and fear. *Atlantic Journal of Communication*, 23(2), 67–80. <https://doi.org/10.1080/15456870.2015.1013101>
- Zhao, E., Wu, Q., Crimmins, E. M., & Ailshire, J. A. (2020). Media trust and infection mitigating behaviours during the COVID-19 pandemic in the USA. *BMJ global health*, 5(10), e003323.