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**Abstract**

Our study examines the relationship between news exposure at the onset of the COVID-19 pandemic, personal threat beliefs, beliefs about others' threat perceptions, and participation in precautionary actions. A survey of 377 U.S. adults revealed a significant main effect of news exposure on various precautionary behaviors (e.g., facial mask wear, physical distancing). Personal threat beliefs and beliefs about others' threat perceptions serve as unique mechanisms mediating the effect of news on specific CDC-recommended and less socially desirable actions. These findings can guide news sources covering health crises in a socially responsible manner.

*Keywords:* news, COVID-19, media effects, threat, health communication, precautionary behaviors

## Effects of News and Threat Perceptions on Americans' COVID-19 Precautionary Behaviors

It has long been established that mass media constitute a chief vehicle for disseminating information about health crises and shaping the public's risk perceptions (e.g., Glik, 2007; Lin & Lagoe, 2013; Parmer et al., 2016; Reynolds & Quinn, 2008). The current study builds upon these findings by examining the role of news exposure at the onset of the COVID-19 pandemic on threat perceptions and engagement in both adaptive precautionary behaviors (i.e., heeding health authorities' recommendations) and maladaptive coping behaviors (e.g., acquiring weapons for self-defense).

### News Exposure and Precautionary Actions

Infectious diseases and health crises receive extensive media coverage (Towers et al., 2015), providing the public with information about the illness severity (Squiers et al., 2019), risk factors (Glik, 2007), and preventative measures (Berry et al., 2007; Lee & Basnyat, 2013). Research on public responses to recent epidemics—such as SARS, H1NI, and most recently, COVID-19—have shown that overall news exposure promotes engagement in various protective measures, including hand-washing and avoiding social gatherings (Choi et al., 2018; Harper et al., 2020; Jiang et al., 2009; Jin et al., 2018; Wise et al., 2020; Wong & Sam, 2011).

Although considerable past research examines the consequences of overall news exposure, reporting on COVID-19 appears to vary across news outlets, possibly resulting in differential effects. For example, early in the pandemic, compared to television news, newspapers tended to politicize the issue by focusing more on political actors than scientists (Hart et al., 2020) and overemphasizing the economic ramifications of the health crisis (Chipidza et al., 2020). At the same time, social media platforms with their growing popularity as a news source, became an epicenter of misinformation promoting mistrust in health authorities (Ahmed et al., 2020).

Beyond a crude comparison between print, television, and social media news outlets, distinctions can further be made within television networks. Researchers rarely consider effects of discrete television networks in the context of health crises, presumably because they are deemed a politically neutral issue. However, this may not be the case: Studies on the Zika and Ebola viruses found variations among television networks mentioning specific risk factors (Ophir & Jamieson, 2020) and preventative policies (Sell et al., 2016). Exposure to such different frames can, in turn, lead to different media effects. Indeed, a study on H1N1 has demonstrated that partisan media exposure to Fox News and CNN exacerbates the differences between audiences' perceptions of the epidemic's severity (Baum, 2011). Similar trends were noted in the context of COVID-19, as Fox News underplayed the gravity of the pandemic (Ash et al., 2020). Based on prior research on news consumption and precautionary actions, and given the limited literature on the specific effects of discrete news sources, the following hypothesis and research question are posited:

**$H_1$**: Overall news exposure is positively associated with engaging in COVID-19 precautionary actions.

**$RQ_1$:** Does the effect of news exposure on precautionary actions differ by news source?

**Threat as a Mechanism for Action**

Ample research has documented that news exposure promotes precautionary health behaviors by increasing media users' fear of the disease (Choi et al., 2018; Lin & Lagoe, 2013; Mertens et al., 2020; Yang et al., 2018). However, people's responses to an epidemic may not only be driven by media's effect on the audience members' own threat perceptions, but also by audience members' beliefs about how *others* may react to the disease. Theories of presumed media influence (Gunther & Storey, 2003) and the third-person effect (Davison, 1983) maintain that people infer the effect that media have on other media users. Individuals then act in response to what they anticipate

to be others' media-induced behaviors. Behavioral changes in response to the presumed media effect on *others* has been robustly documented in a variety of contexts, such as making residential choices and participating in politics (Tsfati & Cohen, 2003, 2005).

Similarly, news exposure increases the public's willingness to take precautionary actions by fostering beliefs about others' responses to threats (Liu & Lo, 2014; Tal-Or et al., 2010). However, several studies found that presumed media effects on others impede their own intention to engage in protective behaviors (Tewksbury et al., 2004; Wei et al., 2008). These conflicting results could be explained by the fact that most research does not consider the unique roles of personal threat and beliefs about others' perceived threat. Studies typically focus on the gap (i.e., difference in score) between the presumed effect of media on self and others, overlooking the absolute magnitude of threat perceptions. Thus, Jin et al. (2018) have advocated for considering media effects on both sets of threat beliefs—about oneself and beliefs about others—as two distinct mechanisms guiding protective health behaviors.

Building on past research, the current study examines processes underlying people's response to COVID-19. It is hypothesized that exposure to news will predict greater engagement in precautionary behaviors. As individuals are exposed to news coverage, they may also make assumptions about the effect media have on others, which could then influence their own precautionary actions (see Figure 1 for conceptual model):

**$H_2$:** News exposure is positively associated with personal threat beliefs and beliefs about others' perceived threat regarding the COVID-19 pandemic.

**$H_3$:** Personal threat beliefs and beliefs about others' perceived threat mediate the effect of news exposure on engaging in COVID-19 precautionary actions.

Another possible explanation for the mixed evidence of presumed media effects on others lies in the nature of the precautionary actions. Most research on epidemic responses focuses on following medical professionals' health recommendations (e.g., hygiene practices). However, individuals also can respond to a crisis by securing scarce resources (Tal-Or et al., 2010; Tewksbury et al., 2004). To explore this possibility, we consider the distinction between two types of precautionary behaviors: (a) heeding guidelines issued by medical authorities (e.g., Centers for Disease Control and Prevention [CDC]); and (b) resource-centered behaviors that can have negative societal implications, including weapon acquisition for self-defense and stockpiling supplies. Shortly after COVID-19 was declared a global pandemic, sales of firearms and ammunitions in the U.S. surged (Collins & Yaffe-Bellany, 2020; Hoops et al., 2020), as a result of public fear of civic disorder in response to the pandemic (Brown, 2020). Another socially undesirable response to the COVID-19 is stockpiling supplies. Nationwide shortages of basic supplies were reported due to individuals overconsuming foods and household essentials to the point of disrupting the supply chain and depriving others of access to these products (Baker et al., 2020; Corkery & Yaffe-Bellany, 2020; Micalizzi et al., 2020; Orden, 2020). Though less attention is directed toward maladaptive behaviors relative to those prescribed by medical authorities, the prevalence of these acts during the pandemic and their potential societal ramifications warrant a closer examination.

Given past research does not clearly draw a distinction between mechanisms that promote adaptive and maladaptive responses in a pandemic context, a research question is posed:

**$RQ_2$:** Are there differences in the threat mechanisms predicting recommended versus less socially desirable precautionary actions?

## Method

### Participants and Procedures

The study has been approved by an Institutional Review Board. An online survey of 377 individuals residing in the U.S. was conducted during the last week of March 2020 using a quota sample through Qualtrics (ages ranging from 18 to 87, $M = 45.05$, $SD = 16.77$; 50.1% women; 49.9% men). Participants also identified as White (66.0%), Black/African American (12.2%), Latinx (11.7%), Asian/Asian American (5.9%), Native American (0.5%), and "Other" (2.1%). The median income bracket was $50,000-75,000, and 83.5% of the respondents had some form of higher education.

## Measures

### *News Exposure*

A commonly used measure of media exposure (e.g., Kelly et al., 2009; Tsfati, 2003) was adapted for this study. Participants were asked to indicate how many days in the previous week they have consumed news from nine news outlets: local television news; MSNBC; Fox News; CNN; national news broadcasts (NBC, ABC, CBS); national newspapers (print or online); local newspaper (print or online); talk radio; and social media (e.g., Facebook). Response options ranged from *not at all* (0) to *every day of the week* (7). To examine the effects of overall news exposure, the responses to all the items were totaled to create an index ($M = 24.29$, $SD = 14.72$, Cronbach's $\alpha = .78$). To explore RQ1 pertaining to discrete media sources, responses to each of these measures were treated as separate variables.

### *Personal Threat Beliefs*

Two items were used to measure the extent to which individuals felt personally threatened by COVID-19 (adapted from Dear et al., 2008; de Zwart et al., 2009; Rolison & Hanoch, 2015) on scales from 0% to 100%. The items asked participants to provide an estimate of their risk of contracting COVID-19 and dying from the virus if they were to contract it. The two items were

strongly correlated ($r = .61$, $p < .001$) and were averaged to create a composite measure ($M = 46.14$, $SD = 26.97$).

***Beliefs About Others' Perceived Threat***

Similar to Jin et al. (2018), the same questions used to measure personal threat were reworded to ask participants to estimate the extent to which "OTHER AMERICANS" believe they are at risk ($r = .69$, $p < .001$; $M = 54.93$, $SD = 25.46$).

***Precautionary Actions***

Participants were asked to what extent they have engaged (1 = *definitely not engage* to 7 = *definitely engage*) in 12 protective behaviors examined in prior research (Bish & Michie, 2010; Brug et al., 2004; Raude & Setbon, 2009; Wong & Sam, 2011) or were recommended by the CDC (2020). An exploratory factor analysis (Maximum Likelihood, Varimax rotation) extracted three factors: physical distancing (Factor 1); other precautionary behaviors—stockpiling, acquiring a weapon for self-defense, wearing a facial mask in public (Factor 2); and hygiene behaviors (Factor 3). Table 1 presents the factor analysis solution.

Conceivably, wearing a mask in public did not load on the same factor as other hygiene behaviors because, at the time of data collection, this practice was discouraged by the CDC (Creveling, 2020). The general public was asked to refrain from using masks in efforts to save them for frontline health workers. Only in April 2020 did the CDC revert their recommendation (CDC, 2020), encouraging the general public to wear masks. Similarly, overconsumption behaviors did not load on the same factor with other physical distancing behaviors. This might suggest stockpiling was not driven by the motivation to reduce the number of store visits as a physical distancing practice. Rather, it seems to constitute a form of competition over resources. In this way,

stockpiling shares some similarities with facial mask wear at a time when it could deprive medical staff of protective gear and with obtaining weapons in anticipation of civic disorder.

However, although facial mask wearing and weapon acquisition do not cross-load on Factor 1 (physical distancing) or on Factor 3 (hygiene behaviors). Their loadings on Factor 2 are relatively weak (.46 and .43, respectively). Thus, facial mask wear and weapon acquisition are considered distinct variables. This resulted in a total of four precautionary actions, averaging the responses to the items loaded on each factor (*physical distancing*, *hygiene*, *stockpiling*), and two single-item precautionary outcomes (*facial masks* and *weapon acquisition*).

### *Demographic Factors*

Demographic factors included respondents' sex, race/ethnicity, education (dummy coded as "male" = 1, "White" = 1, "higher education" = 1), age, income level, and political leaning (1 = *strong democrat* to 7 = *strong republican*; $M = 3.83$, $SD = 1.98$).

## Results

### Direct Effects of News Exposure

In a series of hierarchical regression models, demographic factors (age, sex, race/ethnicity, education, income, political leanings) were entered on the first step as predictors of engagement in specific COVID-19 precautionary behaviors and threat perceptions. Then, a second step of news exposure was added to test hypotheses pertaining to the relationship between news exposure and each of the COVID-19 precautionary behaviors ($H_1$) as well as threat perceptions ($H_2$). Standardized beta regression coefficients are reported for all analyses.

As anticipated, overall news exposure was significantly associated with all precautionary behaviors and threat perceptions. In line with $H_1$, news exposure was positively related to: *hygiene behaviors* ($\beta = .19$, $p = .001$), $F(7, 364) = 3.74$, $p = .001$, $R^2 = .07$; *physical distancing* ($\beta = .23$, $p <$

.001), $F(7, 364) = 6.58$, $p < .001$, $R^2 = .11$; *facial mask wear* ($\beta = .31$, $p < .001$), $F(7, 364) = 8.12$, $p < .001$, $R^2 = .14$; *stockpiling* ($\beta = .27$, $p < .001$), $F(7, 364) = 7.29$, $p < .001$, $R^2 = .12$; and *weapon acquisition* ($\beta = .10$, $p = .049$), $F(7, 364) = 9.82$, $p < .001$, $R^2 = .16$. As predicted in $H_2$, news exposure was positively associated with personal threat beliefs ($\beta = .25$, $p < .001$), $F(7, 364) = 7.71$, $p < .001$, $R^2 = .13$; and beliefs about others' perceived threat ($\beta = .16$, $p = .01$), $F(7, 364) = 2.37$, $p = .02$, $R^2 = .04$.

The addition of news exposure on the second step of the model significantly increased the variance explained (*hygiene behaviors*: $\Delta R^2 = .03$, $F(1, 364) = 11.37$, $p = .001$; *physical distancing*: $\Delta R^2 = .05$, $F(1, 364) = 18.81$, $p < .001$; *facial mask wear*: $\Delta R^2 = .08$, $F(1, 364) = 33.73$, $p < .001$; *stockpiling*: $\Delta R^2 = .06$, $F(1, 364) = 25.32$, $p < .001$; *weapon acquisition*: $\Delta R^2 = .01$, $F(1, 364) = 3.91$, $p < .05$; *personal threat beliefs*: $\Delta R^2 = .05$, $F(1, 364) = 21.28$, $p < .001$; *beliefs about others' perceived threat*: $\Delta R^2 = .02$, $F(1, 364) = 7.74$, $p < .01$). Thus, $H_1$ and $H_2$ were supported.

To examine $RQ_1$ concerning the effects of specific news sources, additional linear regression analyses were performed. Local television news exposure was positively related to *hygiene behaviors* ($\beta = 0.07$, $p = .02$) and *physical distancing* ($\beta = 0.07$, $p = .01$); social media news consumption was positively related to *stockpiling* ($\beta = 0.06$, $p = .04$) and *facial mask wear* ($\beta = 0.14$, $p < .001$); MSNBC exposure was positively related to *facial mask wear* ($\beta = 0.14$, $p = .02$); and watching Fox News was positively related to *weapon acquisition* ($\beta = .24$, $p < .001$).

**Threat Perceptions as Mediators**

To test $H_3$ and $RQ_2$, mediation analyses (PROCESS macro Model 4; Hayes, 2017) were used to estimate the indirect effects and their associated 95% bias-corrected bootstrap confidence intervals (based on 10,000 resamples) for participants' news exposure, through threat perceptions,

on each of the COVID-19 precautionary behaviors. Personal threat beliefs and beliefs about others' perceived threat were included as separate mediators.

***Personal Threat Beliefs***

News exposure had a significant indirect effect through participants' own threat perceptions, on their engagement in *hygiene behaviors*, $B = 0.003$, 95% CI = [0.001, 0.005], *physical distancing*, $B = 0.003$, 95% CI = [0.001, 0.01], and *facial mask wear*, $B = 0.006$, 95% CI = [0.002, 0.01]. That is, participants who consumed more news felt more personally threatened, which then predicted enacting these specific health-oriented behaviors. However, this relationship was not significant for *stockpiling*, $B = 0.0004$, 95% CI = [-0.002, 0.003], or *weapon acquisition*, $B = -0.001$, 95% CI = [-0.01, 0.003]; thus, yielding partial support for $H_3$. Post-hoc Monte Carlo power analyses for simple mediation models indicate that our sample achieved adequate power (.77 – .98; Schoemann et al., 2017).

***Beliefs About Others' Perceived Threat***

There was a significant indirect effect of news exposure, through participants' beliefs about others, on *stockpiling*, $B = 0.003$, 95% CI = [0.0002, 0.01], and *weapon acquisition*, $B = 0.004$, 95% CI = [0.0004, 0.01]. Participants' news consumption was positively associated with believing other people feel threatened, which then predicted enacting these specific behaviors. However, this relationship was not significant for *hygiene behaviors*, $B = -0.001$, 95% CI = [-0.002, 0.001], *physical distancing*, $B = -0.001$, 95% CI = [-0.003, 0], and *facial mask wear*, $B = 0.001$, 95% CI = [-0.001, 0.004]; again, yielding mixed support for $H_3$. Monte Carlo power analyses indicate the sample was slightly underpowered (.62) based on conventional values. In response to $RQ_2$, these findings reveal that personal threat beliefs and beliefs about others' play distinct roles in facilitating specific precautionary behaviors.

## Discussion

Our study examines the role news exposure plays in promoting both recommended and less socially desirable responses to the COVID-19 pandemic. Although news exposure is associated with both types of behaviors, they occur through distinct mechanisms. Recommended behaviors intended to reduce one's risk of contracting the virus—such as observing physical distancing, following enhanced hygiene protocols, and wearing facial masks—were associated with a media-elicited sense of personal threat. At the same time, beliefs about others' reactions to the pandemic heightened adoption of behaviors related to competition for limited resources.

Presumably, individuals are more likely to overstock essentials in anticipation of other people's over-consumption causing a break in the chain of supply. This appears to be particularly true for individuals who rely on social media for news, conceivably because these platforms feature sensational content to garner attention and display other media users' reactions. Similarly, arming oneself ostensibly stems out of safety concerns under the assumption that others who are afraid of shortage of resources may resort to violence. Interestingly, exposure to Fox News appears to contribute to such responses beyond viewers' political ideology. On the other hand, adhering to health authorities' directives depends on the extent to which individuals feel personally threatened or at risk. This pattern of results paints a complex relationship between *one's own beliefs* and *assumptions about others' beliefs* about COVID-19 driven by the media that result in different protective actions. Moreover, few differences emerged among news outlets suggesting that news sources, regardless of their presumed political leanings, generally follow similar patterns of effects.

These findings echo the notion of mean world syndrome and cultivation theory, with greater overall news exposure producing fear and distrust in others (Gerbner et al., 1980). Notably, past cultivation research does not find a consistent link between news exposure and support for gun

rights and ownership (Dowler, 2002; Holbert et al., 2004). The present study adds nuance to this theoretical proposition and outlines distinct psychological pathways that are associated with specific behavioral patterns, some of which are oriented at distrusted others (e.g., weapon acquisition) while others are health-oriented.

Although this work focuses on the amount of news exposure, it is important to consider the quality and content of media coverage (Parmer et al., 2016; Reynolds & Quinn, 2008; Seeger, 2006; Veil & Ojeda, 2010). Our results suggest that journalists should, ideally, provide accurate information that makes the public aware of the risks to themselves and avoid eliciting fear of others. Future research can explore ways in which health officials and journalists can offer such messages. Additionally, future studies should examine the effects of message framing. For instance, episodic frames (e.g., human interest stories) might make the fear of others particularly salient to the reader.

Because our study employs a cross-sectional survey design, it impossible to rule out reverse causal effects, such that those who feel more threatened by the pandemic may seek more information on the topic. Longitudinal research designs would be instrumental in teasing apart the effects of selective news exposure over time and better capture the rapidly evolving media environment. To complement the correlational findings, experimental designs would be useful to assess effects of framing and presentation style.

In sum, the current study offers insight into the effects of news exposure on COVID-19 precautionary behaviors. Although news sources can provide useful information in health crises, extensive news exposure might result in some unintended effects for audience members as they assume other viewers' reactions. It is imperative to continue to understand how media content, journalistic practices, and presentation style can impact public opinion and action.

**Disclosure statement**

No potential conflict of interest was reported by authors.

## References

Ahmed, W., Vidal-Alaball, J., Downing, J., & Seguí, F. L. (2020). COVID-19 and the 5G conspiracy theory: Social network analysis of Twitter data. *Journal of Medical Internet Research*, *22*(5), e19458. http://www.jmir.org/2020/5/e19458/

Ash, E., Galletta, S., Hangartner, D., Margalit, Y., & Pinna, M. (2020). *The effect of Fox News on health behavior during COVID-19*. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3636762

Baker, S. R., Farrokhnia, R. A., Meyer, S., Pagel, M., & Yannelis, C. (2020). *How does household spending respond to an epidemic? Consumption during the 2020 COVID-19 pandemic*. SSRN. http://doi.org/10.2139/ssrn.3565521

Baum, M. A. (2011). Red state, blue state, flu state: Media self-selection and partisan gaps in swine flu vaccinations. *Journal of Health Politics, Policy and Law*, *36*(6), 1021-1059. https://doi.org/10.1215/03616878-1460569

Berry, T. R., Wharf-Higgins, J., & Naylor, P. J. (2007). SARS wars: An examination of the quantity and construction of health information in the news media. *Health Communication*, *21*(1), 35-44. https://doi.org/10.1080/10410230701283322

Bish, A., & Michie, S. (2010). Demographic and attitudinal determinants of protective behaviours during a pandemic: A review. *British Journal of Health Psychology*, *15*(4), 797-824. https://doi.org/10.1348/135910710X485826

Brown, M. (2020, April 20). Fact check: Guns sales rise and crime falls as the coronavirus spreads in US. *USA Today*. https://www.usatoday.com/story/news/factcheck/2020/04/20/fact-check-gun-sales-rise-crime-falls-amid-pandemic/5162481002/

Brug, J., Aro, A. R., Oenema, A., de Zwart, O., Richardus, J. H., & Bishop, G. D. (2004). SARS risk perception, knowledge, precautions, and information sources, the Netherlands. *Emerging Infectious Diseases*, *10*(8), 1486-1489. https://doi.org/10.3201/eid1008.040283

Centers for Disease Control and Prevention [CDC]. (2020). *Coronavirus (COVID-19)*. https://www.cdc.gov/coronavirus/2019-nCoV/index.html

Chipidza, W., Akbaripourdibazar, E., Gwanzura, T., & Gatto, N. M. (2020). *A topic analysis of traditional and social media news coverage of the early COVID-19 pandemic and implications for public health communication*. medRxiv. https://www.medrxiv.org/content/medrxiv/early/2020/07/07/2020.07.05.20146894.full.pdf

Choi, D. H., Shin, D. H., Park, K., & Yoo, W. (2018). Exploring risk perception and intention to engage in social and economic activities during the South Korean MERS outbreak. *International Journal of Communication*, *12*, 3600-3620. https://ijoc.org/index.php/ijoc/article/view/8661

Collins, K. & Yaffe-Bellany, D. (2020, April 2). About 2 million guns were sold in the US as virus fears spread. *The New York Times*. https://www.nytimes.com/interactive/2020/04/01/business/coronavirus-gun-sales.html

Corkery M. & Yaffe-Bellany, D. (2020, April 13). U.S. Food supply chain is strained as virus spreads. *The New York Times.* https://www.nytimes.com/2020/04/13/business/coronavirus-food-supply.html

Creveling, M. (2020, April 2). Should you wear a face mask? The CDC may be reconsidering recommendations. *Health.* https://www.health.com/condition/infectious-diseases/coronavirus/cdc-face-mask-recommendations

Davison, W. P. (1983). The third-person effect in communication. *Public Opinion Quarterly*, *47*(1), 1-15. https://doi.org/10.1086/268763

de Zwart, O., Veldhuijzen, I. K., Elam, G., Aro, A. R., Abraham, T., Bishop, G. D., Voeten, H. A. C. M., Richardus, J. H., & Brug, J. (2009). Perceived threat, risk perception, and efficacy beliefs related to SARS and other (emerging) infectious diseases: Results of an international survey. *International Journal of Behavioral Medicine*, *16*(1), 30-40. https://doi.org/10.1007/s12529-008-9008-2

Dear, K., Scott, L., Chambers, S., Corbett, M. C., & Taupin, D. (2008). Perception of colorectal cancer risk does not enhance participation in screening. *Therapeutic Advances in Gastroenterology*, *1*(3), 157-167. https://doi.org/10.1177/1756283X08097776

Dowler, K. (2002). Media influence on attitudes toward guns and gun control. *American Journal of Criminal Justice*, *26*(2), 235-247. https://doi.org/10.1007/BF02887829

Gerbner, G., Gross, L., Morgan, M., & Signorielli, N. (1980). The "mainstreaming" of America: Violence profile no. 11. *Journal of Communication*, *30*(3), 10-29. https://doi.org/10.1111/j.1460-2466.1980.tb01987.x

Glik, D. C. (2007). Risk communication for public health emergencies. *Annual Review of Public Health*, *28*, 33-54. https://doi.org/10.1146/annurev.publhealth.28.021406.144123

Gunther, A. C., & Storey, J. D. (2003). The influence of presumed influence. *Journal of Communication*, *53*(2), 199-215. https://doi.org/10.1111/j.1460-2466.2003.tb02586.x

Harper, C. A., Satchell, L. P., Fido, D., & Latzman, R. D. (2020). Functional fear predicts public health compliance in the COVID-19 pandemic. *International Journal of Mental Health and Addiction*. Advance online publication. https://doi.org/10.1007/s11469-020-00281-5

Hart, P. S., Chinn, S., & Soroka, S. (2020). Politicization and polarization in COVID-19 news coverage. *Science Communication*, *42*(5), 679-697. https://doi.org/10.1177/1075547020950735

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press.

Hoops, K., Johnson, T., Grossman, E. R., McCourt, A., Crifasi, C., & Benjamin-Neelon, S. E. (2020). Stay-at-home orders and firearms in the United States during the COVID-19 pandemic. *Preventive Medicine*, *141*, 106281. https://doi.org/10.1016/j.ypmed.2020.106281

Holbert, R. L., Shah, D. V., & Kwak, N. (2004). Fear, authority, and justice: Crime-related TV viewing and endorsements of capital punishment and gun ownership. *Journalism & Mass Communication Quarterly*, *81*(2), 343-363. https://doi.org/10.1177/107769900408100208

Jiang, X., Elam, G., Yuen, C., Voeten, H., de Zwart, O., Veldhuijzen, I., & Brug, J. (2009). The perceived threat of SARS and its impact on precautionary actions and adverse consequences: A qualitative study among Chinese communities in the United Kingdom and the Netherlands. *International Journal of Behavioral Medicine, 16*(1), 58-67. https://doi.org/10.1007/s12529-008-9005-5

Jin, B., Chung, S., & Byeon, S. (2018). Media influence on intention for risk-aversive behaviors: The direct and indirect influence of blogs through presumed influence on others. *International Journal of Communication, 12*, 2443-2460.

Kelly, B. J., Leader, A. E., Mittermaier, D. J., Hornik, R. C., & Cappella, J. N. (2009). The HPV vaccine and the media: How has the topic been covered and what are the effects on knowledge about the virus and cervical cancer? *Patient Education and Counseling*, *77*(2), 308-313. https://doi.org/10.1016/j.pec.2009.03.018

Lee, S. T., & Basnyat, I. (2013). From press release to news: Mapping the framing of the 2009 H1N1 A influenza pandemic. *Health Communication*, *28*(2), 119-132. https://doi.org/10.1080/10410236.2012.658550

Lin, C. A., & Lagoe, C. (2013). Effects of news media and interpersonal interactions on H1N1 risk perception and vaccination intent. *Communication Research Reports*, *30*(2), 127-136. https://doi.org/10.1080/08824096.2012.762907

Liu, X., & Lo, V. H. (2014). Media exposure, perceived personal impact, and third-person effect. *Media Psychology*, *17(*4), 378-396. https://doi.org/10.1080/15213269.2013.826587

Micalizzi, L., Zambrotta, N. S., & Bernstein, M. H. (2020). Stockpiling in the time of COVID-19. *British Journal of Health Psychology*. Advance online publication. https://doi.org/10.1111/bjhp.12480

Mertens, G., Gerritsen, L., Duijndam, S., Salemink, E., & Engelhard, I. M. (2020). Fear of the coronavirus (COVID-19): Predictors in an online study conducted in March 2020. *Journal of Anxiety Disorders*, *74*, 102258. https://doi.org/10.1016/j.janxdis.2020.102258

Ophir, Y., & Jamieson, K. H. (2020). The effects of Zika virus risk coverage on familiarity, knowledge and behavior in the US–A time series analysis combining content analysis and a nationally representative survey. *Health Communication*, *35*(1), 35-45. https://doi.org/10.1080/10410236.2018.1536958

Orden, D. (2020). Resilience test of the North American food system. *Canadian Journal of Agricultural Economics/Revue Canadienne D'Agroéconomie*, *68*(2), 215-217. https://doi.org/10.1111/cjag.12238

Parmer, J., Baur, C., Eroglu, D., Lubell, K., Prue, C., Reynolds, B., & Weaver, J. (2016). Crisis and emergency risk messaging in mass media news stories: Is the public getting the information

they need to protect their health? *Health Communication*, *31*(10), 1215-1222. https://doi.org/10.1080/10410236.2015.1049728

Raude, J., & Setbon, M. (2009). Lay perceptions of the pandemic influenza threat. *European Journal of Epidemiology*, *24*(7), 339-342. https://doi.org/10.1007/s10654-009-9351-x

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

Rolison, J. J., & Hanoch, Y. (2015). Knowledge and risk perceptions of the Ebola virus in the United States. *Preventive Medicine Reports*, *2*, 262-264. https://doi.org/10.1016/j.pmedr.2015.04.005

Schoemann, A. M., Boulton, A. J., & Short, S. D. (2017). Determining power and sample size for simple and complex mediation models. *Social Psychological and Personality Science*, *8*(4), 379-386. https://doi.org/10.1177/1948550617715068

Seeger, M. W. (2006). Best practices in crisis communication: An expert panel process. *Journal of Applied Communication Research*, *34*(3), 232-244. https://doi.org/10.1080/00909880600769944

Sell, T. K., Boddie, C., McGinty, E. E., Pollack, K., Smith, K. C., Burke, T. A., & Rutkow, L. (2016). News media coverage of US Ebola policies: Implications for communication during future infectious disease threats. *Preventive Medicine*, *93*, 115-120. https://doi.org/10.1016/j.ypmed.2016.09.016

Squiers, L., Lynch, M., Dolina, S., Ray, S., Kelly, B., Herrington, J., Turner, M., Chawla, D., Becker-Dreps, S., Stamm, L., & McCormack, L. (2019). Zika and travel in the news: A content analysis of US news stories during the outbreak in 2016-2017. *Public Health*, *168*, 164-167. https://doi.org/10.1016/j.puhe.2018.12.009

Tal-Or, N., Cohen, J., Tsfati, Y., & Gunther, A. C. (2010). Testing causal direction in the influence of presumed media influence. *Communication Research*, *37*(6), 801-824. https://doi.org/10.1177/0093650210362684

Tewksbury, D., Moy, P., & Weis, D. S. (2004). Preparations for Y2K: Revisiting the behavioral component of the third-person effect. *Journal of Communication*, *54*(1), 138-155. https://doi.org/10.1111/j.1460-2466.2004.tb02618.x

Towers, S., Afzal, S., Bernal, G., Bliss, N., Brown, S., Espinoza, B., Jackson, J., Judson-Garcia, J., Khan, M., Lin, M., Mamada, R., Moreno, V. M., Nazari, F., Okuneye, K., Ross, M. L., Rodriguez, C., Medlock, J., Ebert, D., & Castillo-Chavez, C. (2015). Mass media and the contagion of fear: The case of Ebola in America. *PloS ONE*, *10*(6), e0129179. https://doi.org/10.1371/journal.pone.0129179

Tsfati, Y. (2003). Debating the debate: The impact of exposure to debate news coverage and its interaction with exposure to the actual debate. *Harvard International Journal of Press/Politics*, *8*(3), 70-86. https://doi.org/10.1177/1081180X03008003005

Tsfati, Y., & Cohen, J. (2003). On the effect of the "third-person effect": Perceived influence of media coverage and residential mobility intentions. *Journal of Communication, 53*(4)*,* 711-727. https://doi.org/10.1111/j.1460-2466.2003.tb02919.x

Tsfati, Y., & Cohen, J. (2005). The influence of presumed media influence on democratic legitimacy: The case of Gaza settlers. *Communication Research, 32*(6)*,* 794-821. https://doi.org/10.1177/0093650205281057

Veil, S. R., & Ojeda, F. (2010). Establishing media partnerships in crisis response. *Communication Studies*, *61*(4), 412-429. https://doi.org/10.1080/10510974.2010.491336

Wei, R., Lo, V. H., & Lu, H. Y. (2008). Third-person effects of health news: Exploring the relationships among media exposure, presumed media influence, and behavioral intentions. *American Behavioral Scientist*, *52*(2), 261-277. https://doi.org/10.1177/0002764208321355

Wise, T., Zbozinek, T., Michelini, G., Hagan, C. C., & Mobbs, D. (2020). Changes in risk perception and protective behavior during the first week of the COVID-19 pandemic in the United States. *Royal Society Open Science*, *7*(9), 200742. https://doi.org/10.1098/rsos.200742

Wong, L. P., & Sam, I. C. (2011). Behavioral responses to the influenza A(H1N1) outbreak in Malaysia. *Journal of Behavioral Medicine, 34*(1), 23-31. https://doi.org/10.1007/s10865-010-9283-7

Yang, C., Dillard, J. P., & Li, R. (2018). Understanding fear of Zika: Personal, interpersonal, and media influences. *Risk Analysis*, *38*(12), 2535-2545. https://doi.org/10.1111/risa.12973

**Table 1**

*Factorial Solution for COVID-19 Precautionary Behaviors*

| | Factor 1 | Factor 2 | Factor 3 |
|---|---|---|---|
| Choose to avoid social gatherings | **.71** | -.01 | .26 |
| Cancel and/or postpone travel plans | **.70** | .03 | .23 |
| Maintain six-feet distance from others in public places | **.67** | .08 | .35 |
| Avoid using public transit in a situation that calls for it | **.65** | .12 | .12 |
| Only leave my household for essential business | **.57** | -.04 | .38 |
| Choose not go to school or work even if I have the option to go | **.55** | .16 | .03 |
| Stock my household with necessary supplies (for example, toilet paper) if I could not leave my home | .23 | **.85** | .12 |
| Create a supply of food beyond what I regularly buy for my household | .18 | **.78** | .03 |
| Wear a facial mask in public spaces | .07 | **.46** | .21 |
| Consider obtaining a weapon for self-defense | -.12 | **.43** | -.11 |
| Be more attentive to cleanliness and disinfection | .27 | .14 | **.86** |
| Wash hands or use hand sanitizer more frequently and/or more thoroughly | .43 | .04 | **.75** |

*Note.* Factor 1 was labeled physical distancing, Factor 2 was labeled other precautionary behaviors, and Factor 3 was labeled hygiene behaviors.

**Figure 1**

*Proposed Conceptual Model*