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Media Exposure and Third-Person Perception: The Mediating Role of Social Realism and Proxy Efficacy

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This study examines the influences of media exposure, social realism, and proxy efficacy on the perceived effects of news about the COVID-19 pandemic. Using data collected from a sample of 1,190 college students in China, this study found that exposure to news about the pandemic is positively related to social realism and proxy efficacy. Furthermore, social realism and proxy efficacy were significantly correlated with third-person perception (TPP). Most importantly, the results of the study show that social realism and proxy efficacy also mediated the relationship between exposure to COVID-19 news and TPP.

Keywords: COVID-19, media exposure, social realism, proxy efficacy, third-person perception, mediation effect

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The third-person effect theory proposes that people tend to perceive mass communication as having a stronger effect on others than on themselves (Davison, 1983). Over the years, the third-person effect has generated numerous studies, which revealed that the biased perceptual effect (i.e., third-person perception [TPP]) was robust in diverse message types (e.g., Paul, Salwen, & Dupagne, 2000; Sun, Pan, & Shen, 2008), across different cultural contexts (Lo, Wei, Zhang, & Guo, 2016), and with multiple research methods (Lo et al., 2016; Paul et al., 2000).

Despite the extensive understanding of the theory, some fundamental psychosocial mechanisms that account for the process of social judgment about media influence on oneself and others are still unclear and warrant further investigation (B. Lee & Tamborini, 2005; Neuwirth, Frederick, & Mayo, 2002; Sun et al., 2008; Wei, Lo, & Lu, 2008). For example, past research on how media exposure is related to TPP is mixed. Although previous research has suggested media exposure may amplify TPP because a higher level of exposure lead to greater knowledge, which, in turn, provides individuals with greater confidence to believe others as vulnerable to media influence (Salwen, 1998), more recent studies, however, found that a higher level of media exposure was related to greater perceived effects on self than on others, thus resulting in narrowed TPP (Liu & Lo, 2014; Wei et al., 2008). In this study, we propose to clarify links between media exposure and TPP through some of the psychosocial mechanisms, specifically through the key constructs of social realism and proxy efficacy.

In the context of processing news about the COVID-19 pandemic, which represents an undesirable message and causes a grave concern about one's health, how do people process such news to evaluate the risk? The present study aims to examine this question by analyzing the role of psychological mechanisms in the social judgment process about media influence on oneself and others. Results of the study will clarify the critical link between media exposure to news and perceived differential effects on self and others through social realism and proxy efficacy.

The public health crisis caused by the COVID-19 pandemic has posed enormous challenges to humans, and its magnitude was beyond scientific prediction (McNutt, 2020). Governments around the world took measures to control the spread of the virus. In China, the measures range from draconian quarantines to laissez-faire mitigation strategies (Maier & Brockmann, 2020). In February 2020 when the Chinese government ordered a lockdown in Wuhan and nearby cities, more than 50 million people were immediately under a mandatory quarantine (Tian et al., 2020). The mandatory "social distancing" measures implemented across the entire country constrained people within an isolated sphere (Kupferschmidt & Cohen, 2020). They could go out only to purchase food and daily necessities with a permit. News media thus served as the main channel for people to stay informed about the pandemic. When news media become the only sources that present the pandemic to the viewers, the pandemic thus can be viewed as a "mediated" disease with media outlets serving as the key proxy for information.

Past research suggests that perceived social reality, gained from media presentation as well as a sense of proxy efficacy, influences an individual's judgment of the severity of the pandemic (Lessiter, Freeman, Keogh, & Davidoff, 2001; Lombard & Ditton, 1997). A highly relevant construct is social realism, which refers to the perceptual judgment of the facts or events covered by media as being literal truth. In this study, it refers to the degree of an individual's sense of COVID-19 pandemic presented by news coverage

as being realistic, coherent, and believable. The judgment of the realness of the stories will generate different perceptual and behavioral results (Westerman, Spence, & Lachlan, 2009).

Further, proxy efficacy refers to the sense of confidence an individual has in another agent's (a person or an institution) ability to carry out actions or policies on his or her behalf (Bandura, 2001; Geller, Dzewaltowski, Rosenkranz, & Karteroliotis, 2009). When individuals view a critical circumstance that is out of self-control, they will likely turn to the proxy efficacy for gaining confidence in handling the situation (Bandura, 1997, 2001). Using news coverage of the COVID-19 pandemic as the context, this study built a model that reflects the theoretical linkages among media exposure, social realism, proxy efficacy, and TPP. The model, which clarifies the key antecedents of TPP and how media exposure affects TPP, will contribute to the third-person effect literature.

Context of the Study

This study examines the third-person hypothesis and focuses on the coverage of the resurgence of COVID-19 in Beijing, the capital city of China. The Chinese government took aggressive measures including the lockdown of Wuhan and nearby cities and partial movement restrictions on many other cities (Maier & Brockmann, 2020; Tian et al., 2020). On March 18, 2020, China reported zero locally transmitted COVID-19 cases for the first time. However, a resurgence of the pandemic was confirmed in Beijing on June 11, 2020, which ended a period of 55 consecutive days without local transmission reported. The Chinese authorities reimplemented the stringent pandemic control measures in Beijing. Considering the politically symbolic meaning of Beijing, this public health crisis received an unprecedented level of media coverage. China Central TV, China's national broadcasting outlet, provided 24-hour news coverage about the pandemic in Beijing until early July. Structural data mining of the public accounts of *WeChat*, the most popular social media in China, revealed 11,593 news articles published on the platform, with a total of 63.45 million reads from June 11 to June 22 alone. Thus, the news about the resurgence of COVID-19 in Beijing offers a salient case to investigate the perceived impact of news coverage of the pandemic among viewers.

Literature Review

Third-Person Effect Generated by COVID-19 Pandemic Messages

Pertaining to the presumed influence of media messages, third-person effect hypothesized that people tend to believe that others are more likely to be influenced than themselves (Davison, 1983). The theory consists of perceptual and behavioral components (Paul et al., 2000; Sun et al., 2008). The perceptual component states that people will perceive that others are more influenced by media messages than themselves, which is TPP. The behavioral component indicates that people will act according to such perceptions.

Considerable research has empirically supported the third-person effect hypothesis (for a review, see Paul et al., 2000; Sun et al., 2008). When the media messages are socially undesirable (Sun et al., 2008) or perceived to be nonbeneficial or involving potential risks (Gunther & Mundy, 1993), third-person effect will be observed. Specifically, past studies indicate that people tend to perceive that news about the bird flu (Wei & Lo, 2007; Wei et al., 2008), or the H1N1 pandemic (H. Lee & Park, 2016; Liu & Lo, 2014),

to influence others more than themselves. The COVID-19 pandemic has caused unprecedented damage to society and threatened the health of everyone. In such a context, the extensive news coverage of the pandemic would resemble that of avian flu or swine flu in that they all deal with health threats to the public (Lee & Park, 2016; Liu & Lo, 2014; Wei et al., 2008). Thus, such news, which caused public concerns and anxiety, is considered undesirable. Past research has found that TPP is unequivocal when news messages are seen as socially undesirable (Lo, Wei, Lu, & Hou, 2015; McLeod, Eveland, & Nathanson, 1997). Based on these findings, we propose the following hypothesis:

H1: Respondents will perceive themselves to be less likely than others to be influenced by news about the resurgence of the COVID-19 pandemic in Beijing.

Media Exposure and Social Realism

Media exposure is considered to be an important predictor of TPP about the impact of health news because people rely on news media for information when facing natural or social disasters (Cohen, Vijaykumar, Wray, & Karamehic-Muratovic, 2008; Jang & Park, 2018; Liu & Lo, 2014). When China was in a physical shutdown in early 2020 (Tian et al., 2020), most people were stuck at home and learned about the pandemic through news media. When people process public health news, they will be concerned more about how the disease can affect them (Liu & Lo, 2014; Wei et al., 2008). For instance, respondents worried that the H1N1 pandemic would spread to their own backyards in 2009 (Briggs & Nichter, 2009).

COVID-19 differs from other public health crises in its high level of uncertainty about cause and solutions and its mortality rate (S. T. Lee, 2014; McNutt, 2020). The ease of human-to-human transmission puts everyone in danger. Because of the uncertainty of the COVID-19 pandemic, we assume that people will be more involved in processing the messages concerning the pandemic and evaluate the situation more attentively. As Bourdon (2020) suggests, the news media not only present the information about an evolving event but also potentially transport the audiences to the scene. In the context of COVID-19, when the audiences are physically away from the scene where the pandemic unfolds, how real they feel the events are taking place from media content will influence their perception of as well as attitudes toward the pandemic.

Accordingly, the level of realism that viewers perceive with the pandemic is a focal construct to this study. Viewing social reality as it is presented in media could be considered similar to social presence—the degree to which that media could accurately represent what is happening in society as if the event occurs in front of audience members' eyes (Lombard & Ditton, 1997). Others argue that social presence could vary by the level of realism because of the sensation of reality the audience experienced (Weber, Weibel, & Mast, 2021). Different terms were used to describe the "realism" reflected through media (e.g., Westerman et al., 2009). Lombard and Ditton (1997) proposed social realism, the extent to which a media depiction is close to the scene that actually occurs in the real world. "Realism," reflected in different forms, has been studied for its effects on human activities, such as the effect of telepresence on the performance of video game players (Liu, Lo, & Wei, 2020), but no research has examined the role that social realism plays in the process that media exposure generates the perceived impact of media messages, and the difference of such perceived impact between oneself and others (i.e., the TPP).

In the present study, we define social realism as the perceptual judgment of the facts or events covered by media as being literal truth. It concerns the extent to which the events and actors within an environment are perceived as realistic (Lombard & Ditton, 1997). In the context of COVID-19, we define social realism as the degree of an individual's sense of the COVID-19 pandemic presented by news coverage as being realistic, coherent, and believable. Previous research shows that increased exposure to a medium extends the degree of presence perception (Liu et al., 2020). According to the accessibility heuristic hypothesis (Shrum, 1997; Shrum, Wyer Jr., & O'Guinn, 1998), heavy viewers of news stories about COVID-19 will learn more about the disease, get more familiar with the curing event, and will be reminded of specifics of the pandemic. Research also found that when viewing news coverage, people tend to process the information through encoding, storage, and retrieval after accessing the news stories (Lang, 2000). Thus, the more people get involved in news stories, the more they will be immersed with such information, and the more they will view the events as real (Shrum et al., 1998). Therefore, we propose the following hypothesis:

H2: Exposure to news about the resurgence of the COVID-19 pandemic in Beijing will be positively correlated with perceived social realism of such news.

Social Realism and TPP

As shown in previous studies, the sense of realism of news stories will produce variant perceptions of the facts and events covered, and the judgment of the realness of stories will generate different perceptual and behavioral outcomes (Westerman et al., 2009). According to social cognitive theory (SCT), individuals are more likely to attend to stimuli when they perceive these stimuli as realistic (Bandura, 1994). Individuals in a state of social realism would pay more attention to the content and experience enhanced learning (Cauberghe, Geuens, & De Pelsmacker, 2011; Suh & Chang, 2006). When the content is enjoyable, social realism will increase positive attitudes and well-being (Suh & Chang, 2006). When the content of mediated information is socially undesirable, social realism will increase the perception of severity and the likelihood of the risks associated with the news stories, such as in the case of natural disasters (Westerman et al., 2009; Westerman, Spence, & Lin, 2015). People experiencing the social realism of hurricane news stories are more likely to view the disaster as severe (Westerman et al., 2009).

In the present study, because of the severity of the pandemic, we propose that people who perceive news about the resurgence of COVID-19 in Beijing as real will process relevant information about the pandemic in more detail, judge the pandemic as more severe, and eventually feel more threatened by such news. People in China rely on news media to access information relevant to the pandemic. Past research suggests (Liu & Lo, 2014; Wei et al., 2008) that the more attentively people evaluate the information, the more they will be concerned about their own health. Thus, it is expected that individuals' perceptual judgment of the degree of realism of the news stories of the COVID-19 pandemic will affect their judgment on the impact of the pandemic. People who perceived social realism of news about the resurgence of COVID-19 will perceive stronger effects of such news on themselves than on others. Thus, the perception difference will produce a reverse TPP effect. As a result, perceived social realism will be negatively correlated with TPP about the impact of COVID-19 news. However, given the lack of empirical findings, a research question is raised:

RQ1: Will perceived social realism of news about the resurgence of the COVID-19 pandemic in Beijing be significantly related to TPP of such news?

Moreover, we also propose that social realism will mediate the relationship between media exposure and TPP about news covering the resurgence of COVID-19 in Beijing. When assessing the influence of COVID-19 news, people exposed to news stories will integrate the media messages into a mental reality of the events and then will evaluate how they themselves and other people will be influenced (Van Damme et al., 2019). With news coverage connecting people to the pandemic, whether the mediated theme or scenario is perceived as "real" becomes the crucial element in evaluating how the media messages influence the audience. If people perceived the news stories as real to life, they will be more likely to judge the likelihood and severity of the disasters like a hurricane as real (Westerman et al., 2009). Perceived social realism, which embodies the perceived "being real" quality of the event, thus plays the mediating role between media exposure and media effect. We will extend the third-person effect literature by examining the mediating role of social realism between media exposure and TPP. We anticipate that exposure to news about COVID-19 will yield a certain level of social realism, which could make people worry more about themselves compared with others. Such perceived impact of the COVID-19 pandemic because of media messages will reduce TPP. Based on the previous discussion, we propose the following research question:

RQ2: Will social realism mediate the relationship between media exposure and TPP concerning news about the resurgence of the COVID-19 pandemic in Beijing?

Media Exposure and Proxy Efficacy

Although media exposure potentially brings the scene to the audience and facilitates the construction of social reality (Luther & Zhou, 2005; Westerman et al., 2009), the audience also might exercise various agencies in processing the messages before forming attitudes or engaging in behavioral responses (Bandura, 1997). Several psychological mechanisms might play an important role in affecting judgment formation, including proxy efficacy, which takes into account the evaluation of a third party to function effectively on one's behalf (Bray, Gyurcsik, Culos-Reed, Dawson, & Martin, 2001). According to Bandura (1997), individuals trapped in situations in which they lack absolute control of the contingencies that must be addressed will likely use proxy efficacy as supplementary to enhance personally efficacious beliefs. Thus, evaluating proxy efficacy among the individuals who have to cope with the COVID-19 pandemic will help understand people's responses to the crisis.

SCT describes proxy efficacy as the agency in moderating cognition (Bandura, 1997, 2001). While self-efficacy is the outcome of self-evaluation of the capacity to fulfill tasks essential to oneself, proxy efficacy is the perception of the degree to which others, as the proxy, can work on one's behalf, or the belief about the third-party's positive or initiative involvement in the self's activity (Bray & Cowan, 2004; Geller et al., 2009). In the current study, proxy efficacy is considered as people's confidence that the community will perform well on one's behalf in terms of carrying out policies and actions when countering a public health crisis for any potential negative effect (Bandura, 1997; Elias & MacDonald, 2007).

Evaluation of the self, according to SCT, occurs within a social context. In some cases, people are unable or reluctant to handle a situation; in other cases, they assume others might help them solve the problem. People under certain circumstances will turn to the proxy (Bandura, 1997, 2001). The generality of the proxy is diversely associated with the environment wherein tasks or issues are involved. If the issue is individualized, the proxy can be the immediate person providing the service. If the issue is collectively orientated, the proxy role will concern a much wider range of people. When the whole world is under the threat of COVID-19, the effort of each individual can be productive only within a collective context. In China, the government assigned the responsibility of controlling the pandemic to different levels of communities, and thus the "self" assigns the community a "proxy" role and will evaluate the effect of the pandemic in respect to the capacity of that proxy.

Concerning the pandemic, people typically have little power in controlling the spread of the virus, while exposure to news stories could enhance their proxy efficacy after learning that their communities are capable of coping with the pandemic. Past research demonstrates that news coverage of public health issues is more likely to apply gain frames and positive tones (S. T. Lee, 2014), which suggests that people will be exposed to news stories that imply the government and the community were effective in controlling health crises. The mainstream Chinese news media represented a reality that reflected the general Chinese ideological boundary (Luther & Zhou, 2005), which tended to cover the public health crisis from an "effective control" theme while exaggerated stories about accidents were typically shunned (Zhang & Fleming, 2005, p. 327). In addition, Chinese media typically use government officials as sources for news stories about socially undesirable issues to ensure that the coverage is in line with the central government (Hong, 2013; Yang, 2014). Within the general discourse that the national emergency response delayed the growth and limited the size of the COVID-19 pandemic in China (Tian et al., 2020), it is expected that people viewing such news stories will gain proxy efficacy concerning their communities. Exposure to news stories about the measures and the ensuing effect of the measures will produce social realism of the news events, and the perceived social realism of such news can provide confirmative information in favor of the community's ability and performance and thus increase the individuals' confidence in the community. Therefore, the higher the level of perceived social realism concerning news about the COVID-19, the greater the proxy efficacy. We thus propose the following research questions:

RQ3: Will exposure to news about the resurgence of the COVID-19 pandemic in Beijing be significantly related to proxy efficacy?

RQ4: Will social realism be a significant correlate of proxy efficacy?

Proxy Efficacy and TPP

In a community context, the confidence that other members will work in favor of the self will prompt individuals' confidence that they will solve the stressful issues (Bray & Cowan, 2004; Elias & MacDonald, 2007). When people are confident that the proxy agents are actively with them and have the ability to assist in attaining the goal, they are more satisfied with the activities they participated in, and are more likely to sustain the effort in the activity persistence (Bray & Cowan, 2004; Geller et al., 2009). These studies suggest that proxy efficacy will promote confidence in controlling a stressful situation and thus will enhance people's

confidence in facing challenging situations. The confidence that proxy agents can work effectively on one's behalf can decrease an individual's perceived difficulty of a challenging scenario (Shields & Brawley, 2007). Recent research incorporated proxy efficacy into the general perceived efficacy and found that proxy efficacy has a stronger effect than self-efficacy on danger control outcomes in a public health emergency (Li, 2018). Another study (F. L. F. Lee, 2009) also found that efficacious persons may attempt to prevent themselves from being affected by media messages and might even take a critical attitude toward the messages. The increase of proxy efficacy would then lead people to downplay the negative effect of outside adversity and reduce the perceived effect of the messages.

In the context of the COVID-19 pandemic, when people believed that the community could carry out measures to effectively control the potential spread of the virus, they were less concerned about the pandemic and thus felt less influenced by outbreak news. That is, as proxy efficacy increases, the perceived effects of news about the COVID-19 on oneself decreases. However, considering people's tendency to attribute greater influence of media messages on the proverbial vulnerable others than themselves, the perceived effect of news about COVID-19 on others will likely stay stable. As a result, proxy efficacy will result in fewer perceived effects on oneself than on others, thus leading to greater TPP. We thus propose the following research hypothesis and research question:

H3: Proxy efficacy will be positively correlated with TPP concerning news about the resurgence of the COVID-19 pandemic in Beijing.

RQ5: Will proxy efficacy mediate the relationship between media exposure and TPP concerning news about the resurgence of the COVID-19 pandemic in Beijing?

We also developed a theoretical model and implemented a structural equation modeling to further explore the relationships among media exposure, social realism, proxy efficacy, and TPP as shown in Figure 1. We seek to integrate the theoretical concepts of media exposure, social realism, proxy efficacy, and TPP into one coherent framework.

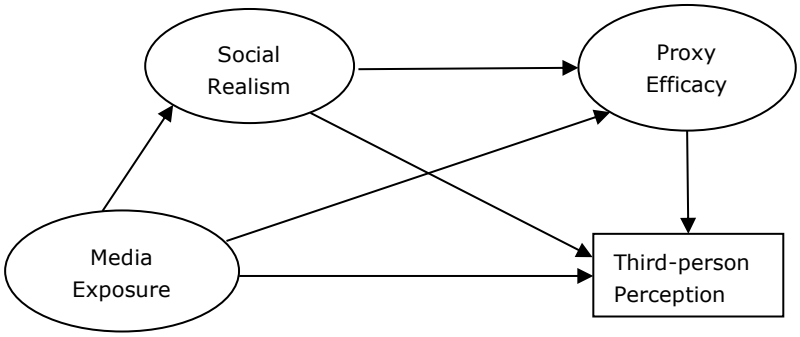

Figure 1. Proposed conceptual model predicting third-person perception.

Method

In June 2020, Beijing, the capital city of China, was hit with the second wave of COVID-19 outbreaks with spikes in confirmed cases, which caused another lockdown of the city of 21 million residents. Accordingly, Jinan, the capital city of Shandong Province, which is located 260 miles southeast of Beijing, was chosen as the venue to collect data because Jinan is geographically close to Beijing and was threatened by the second wave of outbreaks in Beijing. We targeted college students in Jinan as the population to study based on the following considerations: (a) this study seeks to examine multivariate relationships affecting TPP concerning the COVID-19 pandemic; estimating the population parameters is not our goal; (b) a student sample may not produce generalizable results to the whole population, but the results of multivariate relationships from a student sample were found consistent with those from a random sample of the general population (Basil, Brown, & Bocarnea, 2002).

A stratified multistage sampling strategy was used. First, a total of 10 universities were randomly selected from a pool of 19 universities in Jinan. Next, four classes were randomly chosen from each selected university. In late June 2020, invitations for participation in the survey were sent to 2,109 respondents who registered in the selected 40 classes with the assistance of the instructors of those classes. All students in the sample used *WeChat*, an instant messenger, because of the class requirement. With the assurance of voluntary participation and confidentiality, the students were asked to fill out a questionnaire on *WeChat*. A total of 1,190 respondents successfully completed the survey, producing a response rate of 56.4%.

Of the sample, the gender ratio was about even (46.1% male vs. 53.9% female). The age of the respondents ranged from 17 to 25 (M = 20.31, SD = 1.39). Among the 1,190 respondents, 34.7% were freshmen, 23.9% sophomores, 34.7% juniors, and 6.6% seniors.

Measurement

Media exposure was measured with the general question: "How often do you read/watch news about the COVID-19 pandemic?" with respect to five media channels: (1) television, (2) radio, (3) Internet, (4) social media, and (5) network videos. A 5-point sematic differential scale (1 = never, 5 = frequently) adapted from Liu and Lo (2014) was used. The five items were averaged to build an indicator of *media exposure* (M = 3.22, SD = 0.94, Cronbach's α =.81).

Social realism was measured with three statements adapted from Lombard, Weinstein, and Ditton (2013) on a 5-point Likert scale (1 = "strongly disagree" and 5 = "strongly agree"). The three items were added and averaged to build an indicator of *social realism* (M = 3.04, SD = 1.08, Cronbach's α=.93).

Proxy efficacy was measured with four items adapted from prior studies (Bray & Cowan, 2004; Elias & MacDonald, 2007) on a 5-point Likert scale. The four items were added and averaged to create a composite indicator of proxy efficacy (M = 3.82, SD = .93, Cronbach's α = .93).

Perceived effects on oneself were measured with three items modified from previous studies (Liu & Lo, 2014; Siu, 2008; Wei et al., 2008), which asked the respondents to indicate their agreement with the

statements that news coverage of the resurgence of the COVID-19 pandemic in Beijing made them (1) frightened, (2) concerned about the pandemic, and (3) nervous when being in a crowd (1 = "strongly disagree" and 5 = "strongly agree"). The three "self" items were averaged to create a measure of "*perceived effects on oneself"* (*M* = 3.03, *SD* = 1.08, Cronbach's *α* = .93).

Perceived effects on others were measured with three parallel items (replacing "you" and "yourself" with "others" and "themselves"). The three "others" items were added and averaged to form an index of *"perceived effect on others"* (*M* = 3.32, *SD* = 1.08, Cronbach's *α* = .93).

TPP scores were derived by subtracting the perceived effects of news about the resurgence of the COVID-19 pandemic on oneself from the perceived effects of such news on others (*M* = .29, *SD* = .77).

Results

Confirmatory factor analysis was used to test the construct validity of the key variables by testing the relationship between each latent variable and its respective indicators. Table 1 presents the results of the confirmatory factor analysis. To evaluate the goodness of the model fit, the following criteria were used: Chi-square (X^2/df) ratio below 3, CFI greater than .95, and RMSEA less than .06 (Hu & Bentler, 1999). The Chi-square for the model was significant, X^2 = 467.16, *df* = 111, $p < .001$ (X^2/df *ratio* = 4.21); the comparative fit index (*CFI* = .98), the normal fit index (*NFI* = .97), the Tucker Lewis index (*TLI* = .97), and the root mean square error of approximation (*RMSEA* = .052) indicate that the model fit was acceptable.

As shown in Table 1, the factor loadings of most items were greater than .70 except for the three media exposure items (.57 for television exposure; .53 for radio exposure; and .66 for Internet exposure). To assess the convergent validity of the variables, we calculated construct reliability (CR) and average variance extracted (AVE). The five latent constructs had acceptable construct reliability: media exposure (α = .79), social realism (α = .92), proxy efficacy (α = .93), perceived effects on oneself (α = .91), and perceived effects on others (α = .93). The average variance extracted ranged from .44 for media exposure, .79 for social realism, .69 for perceived effects on oneself, and .77 for perceived effects on others. Because all AVEs exceeded the .50 except for the media exposure construct, these results show adequate convergent validity.

Table 1. Descriptive Statistics of Key Variables and Their Standardized Factor Loadings Estimated in Confirmatory Factor Analysis.

Scales and items	Mean	SD	Factor loadings
Media exposure	3.22	.94	
Television	2.58	1.31	.57
Radio	2.38	1.30	.53
Internet	3.95	1.11	.66
Social Media	3.67	1.15	.72
Network Videos	3.36	1.24	.79
CR (AVE)			.79 (.44)
Social Realism	3.04	1.08	
The event I saw/heard in news about the resurgence of the COVID-19 in Beijing would occur in the real world.	3.02	1.16	.88
The event I saw/heard in news about the resurgence of the COVID-19 in Beijing could occur in the real world.	3.08	1.13	.88
The way in which the events I saw/heard in news about the resurgence of the COVID-19 in Beijing is a lot like the way they occur in the real world.	3.03	1.18	.90
CR (AVE)			.92 (.79)
Proxy Efficacy	3.82	.93	
The community is confident that it can control the COVID-19 pandemic.	3.91	1.01	.79
The community is able to help people to cope with the COVID-19 pandemic.	3.88	1.00	.85
The community is well prepared to handle the COVID-19 pandemic.	3.80	1.03	.80
The community is skilled in various methods of handling the COVID-19 pandemic.	3.68	1.03	.87
CR (AVE)			.93 (.69)
Perceived effects on oneself	3.03	1.08	
Frightened	2.98	1.15	.90
Concerned about the pandemic	3.16	1.14	.90
Nervous when being in a crowd	2.97	1.17	.91
CR (AVE)			.91 (.81)
Perceived effects on others	3.32	1.08	
Frightened	3.24	1.17	.90
Concerned about the pandemic	3.37	1.14	.87
Nervous when being in a crowd	3.36	1.15	.86
CR (AVE)			.91 (.77)

Note. *CR* = Construct Reliability; *AVE* = Average Variance Extracted.

In examining the respondents' TPP, H1 predicted that respondents would perceive themselves to be less likely than others to be influenced by news about the resurgence of COVID-19 in Beijing. A series of paired sample t-tests were conducted. The results in Table 2 supported the baseline third-person effect hypothesis for the individual measures and combined effect index t (1189) =13.01, $p < .001$. As expected, the respondents perceived themselves to be less influenced than others by news about the resurgence of the COVID-19 in Beijing. Thus, H1 was supported.

Table 2. Mean Estimates of Perceived Effects of News About COVID-19 Pandemic on Oneself and Others.

		Comparison groups		
Samples	N	Self	Others	t-values
Frightened	1190	2.98(1.15)	3.24(1.17)	9.63***
Concerned	1190	3.16(1.14)	3.37(1.14)	8.04***
Nervous	1190	2.97(1.17)	3.36(1.15)	14.15***
Combined	1190	3.03 (1.08)	3.32(1.08)	13.01***

Note. Figures in parentheses are standard deviations. ****p < .001.*

H2 examined the relationships between media exposure and social realism. A hierarchical multiple regression analysis was performed in which gender and age were entered first, followed by media exposure. The dependent variable was social realism. Results of the regression analysis in Table 3 revealed that media exposure was a significant positive predictor of social realism (β =.50, $p < .001$) after controlling for gender and age. The more respondents read or viewed news about the resurgence of COVID-19 in Beijing, the greater social realism they experienced. H2 was supported.

Table 3. Hierarchical Regression Analysis Predicting Social Realism and Proxy Efficacy.

Independent variables	Social realism	Proxy efficacy
Block 1: Demographics		
Gender	.03	.01
Age	.07**	.01
Adjusted R^2	1.2%	.01%
Block 2: Media exposure		
Media exposure	.50***	.36***
Incremental adjusted R^2	24.7%	16.9%
Block 2: Social realism		
Social realism		.10***
Incremental adjusted R^2		.07%
Total adjusted R^2	25.9%	17.7%

Notes. Cell entries are standardized regression coefficients from the final regression equation with all blocks of variables in the model.
N = 1,190 ***$p < .001$; **$p < .01$, *$p < .05$.

RQ2 examined the relationship between social realism and TPP about the impact of COVID-19 news. To answer the research question, three hierarchical regression analyses were performed in which gender and age were entered first, followed by exposure to news about the COVID-19 pandemic and social realism. Proxy efficacy was entered in the final block. Table 4 presents the results of these regression analyses. Social realism was correlated more strongly and positively with perceived effects of news about COVID-19 on oneself (β = .55, p < .001) than perceived effects of such news on others (β = .37, p < .001). As a result, social realism was negatively associated with the TPP (β = −.25, p < .01). Respondents who experienced greater social realism of news about COVID-19 were more likely to perceive a lower level of TPP of such news.

RQ3 examined the relationship between exposure to news about the COVID-19 pandemic and proxy efficacy. Results of the hierarchical regression analyses shown in Table 3 were used to answer the question. Media exposure was positively and significantly associated with the proxy efficacy (β = .36, p < .001). Higher media exposure led to greater proxy efficacy.

RQ4 explored the relationship between social realism and proxy efficacy. To answer the question, results of the hierarchical regression analysis shown in Table 3 were consulted. Social realism had a positive and significant effect on proxy efficacy (β = .10, p < .001). Respondents who perceived higher social realism of COVID-19 news were more likely to have a higher level of proxy efficacy.

In addition, H3 predicted that proxy efficacy would be positively correlated with TPP about the impact of COVID-19 news. The results of the hierarchical regression analyses were used to test it. As shown in Table 4, proxy efficacy was more strongly and significantly correlated with perceived effects of news about the resurgence of COVID-19 in Beijing on others (β = .17, p < .001) than perceived effects of such news on oneself (β = .05, p < .05). As a result, proxy efficacy was significantly and positively related to TPP (β = .16, p < .001). A higher level of proxy efficacy that respondents perceived from the COVID-19 news led to a higher level of TPP about the impact of COVID-19 news. H3 was supported.

Table 4. Hierarchical Regression Analysis Predicting Perceived Effects on Oneself, Perceived Effects on Others, and TPP.

	Perceived effects		
Independent variables	Self	Others	TPP
Block 1: Demographics			
Gender (Female)	.10**	.13***	.03
Age	.07**	.05	−.03
Adjusted R^2	2.7%	2.3%	.03%
Block2: Media exposure			
Media exposure	.12***	.09**	−.05
Adjusted R^2	17.2%	11.3%	1.2%
Block 3: Social realism			
Social realism	.55***	.37***	−.25**
Incremental adjusted R^2	22.5%	10.9%	.04%
Block 4: Proxy efficacy			
Proxy efficacy	.05*	.17***	.16***
Incremental adjusted R^2	.01%	2.2%	2.1%
Total adjusted R^2	42.5%	26.7%	7.6%

Notes. Beta weights are from final regression equation with all blocks of variables in the model. N = 1,190 ***p < .001; **p < .01, *p < .05.

Test of Mediation

To explore whether perceptual realism and proxy efficacy mediate the impact of media exposure on TPP, we built a model to empirically test the hypothesized links among media exposure, social realism, proxy efficacy, and TPP. As Figure 2 shows, our model on TPP specifies that media exposure will affect social realism, which then leads to proxy efficacy, which will, in turn, affect TPP.

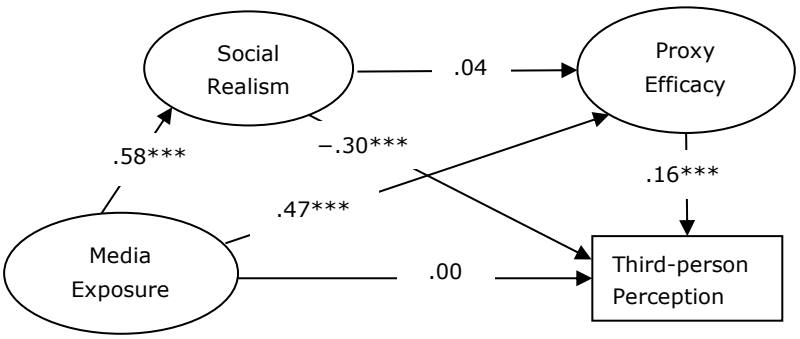

Figure 2. Structural equation model of variables predicting third-person perception.

To test the model, we employed structural equation modeling using Amos 25. Results of the structural model testing show that the Chi-square for the model was significant, $X^2 = 277.26$, $df = 52$, $p < .001$ (X^2/df *ratio* = 5.33), and the comparative fit index (*CFI* = .98), the normal fit index (NFI = .98), the Tucker Lewis index (*TLI* = .97), and the root mean square error of approximation (*RMSEA* = .06) indicated that the model fit was acceptable. The model explained 33.4% of the variance in social realism, 24.5% of the variance in proxy efficacy, and 8.7% of the variance in TPP.

In terms of strengths of the linkages between the exogenous variable and the endogenous variables, the structural equation model showed that media exposure had a strong and positive effect on social realism ($\beta = .58$, $p < .001$) and proxy efficacy ($\beta = .47$, $p < .001$). Social realism ($\beta = -.30$, $p < .001$) and proxy efficacy ($\beta = .16$, $p < .001$) were significantly correlated with TPP. However, media exposure was not significantly associated with TPP ($\beta = .00$, $p > .05$).

Overall, the structural equation model results validate that media exposure was a significant predictor of social realism and proxy efficacy, which had a direct impact on TPP. These results suggest that media exposure's impact on TPP was indirect and was mediated by social realism and proxy efficacy.

To assess the mediating effects of social realism and proxy efficacy in mitigating the effect of media exposure on TPP, we adopted a bootstrapping procedure using the SPSS version of PROCESS macro developed by Hayes (2018). The bootstrapping procedure used 5,000 bootstrap samples and a 95% bias-corrected bootstrap-confidence interval.

Results of the bootstrapping analysis showed that social realism negatively mediated the effects of media exposure on TPP as 95% CI levels were entirely below zero ($b = -.133$, $SE = .019$, 95% *CIs* = [−.171, −.098]). Proxy efficacy positively mediated the effects of media exposure on TPP as 95% CI levels were entirely above zero ($b = .063$, $SE = .014$, 95% *CIs* = [.035, .092]). Therefore, both social realism and proxy efficacy significantly mediated the relationship between media exposure and TPP.

Taken together, these findings suggest that exposure to news about the COVID-19 pandemic indirectly influenced TPP about such news and that its impact was mediated by social realism and proxy efficacy.

Discussion and Conclusion

This study examined the third-person effect of news about the resurgence of the COVID-19 pandemic in Beijing. The results of this study confirmed Davison's third-person effect hypothesis by showing that news about the COVID-19 pandemic also produces third-person effect. Another important finding of this study is that both social realism and proxy efficacy were significant predictors of TPP about the impact of COVID-19 news. Perceived social realism of COVID-19 news narrowed the TPP gap, while proxy efficacy produced a larger TPP discrepancy. These findings suggest that news about a critical health threat that is perceived as realistic tends to reduce TPP. When assessing the influence of COVID-19 news, respondents who perceived such news as real were more likely to take the threat presented in the news seriously and acknowledge the influence of such news on themselves. As a result, a smaller TPP was observed.

In contrast, news about a health threat that evokes more proxy efficacy thoughts is more likely to enhance TPP. That is, when respondents believed that the government or the communities would work effectively to control the spread of the coronavirus, they were more likely to perceive news about the COVID-19 pandemic to have a greater influence on others than on themselves, thus a larger self-other perceptual gap was observed.

These findings contribute to the third-person effect theory in two ways. First, past research focused on desirability of media messages in triggering TPP (Shan, Faber, & Youn, 1999; Tsfati & Cohen, 2005). With a focus on perceived realism of news stories as a factor affecting TPP, we broadened the scope of media message. Second, past research tested self-efficacy as a factor in reducing TPP (Rosenthal, Detenber, & Rojas, 2015). In the context of news about a global pandemic, we used proxy efficacy as a mechanism in explaining TPP concerning COVID-19 news. The greater the proxy efficacy one perceived, the greater the self-others perceptual gap occurred. These findings help advance the existing research by providing insights into how perceptions such as social realism and proxy efficacy function as the agency in moderating cognition—TPP.

The present study also contributes to the literature on the third-person effect by developing a theoretical model to reflect the relationships among media exposure, social realism, proxy efficacy, and TPP. Results of the structural equation analysis indicated that there were significant paths from media exposure to social realism and proxy efficacy, and from social realism and proxy efficacy to TPP. These findings suggest that media exposure is an important variable that predicts and precedes social realism and proxy efficacy. Although media exposure was not a significant predictor of TPP, it had an indirect effect on the self-other perceptual gap through its association with social realism and proxy efficacy. Previous research on the third-person effect has overlooked the indirect effect of media exposure on TPP. By conducting two mediation tests, this study demonstrated that media exposure is indirectly associated with TPP through the two mediators of social realism and proxy efficacy. These findings suggest that social realism and proxy efficacy, both of which are conditioned by media exposure, are more likely to lead to variations of TPP. These findings contribute to the third-person effect research by providing evidence for a link between media exposure, social realism, proxy efficacy, and TPP.

The COVID-19 pandemic as a global public health crisis has threatened the lives of millions of people around the world. As the first country to locate reported cases of COVID-19, the Chinese government took more stringent control measures, compared with other countries, and the pandemic was controlled quickly. On the other hand, the Chinese people experienced anxiety and worried about the threats to themselves as much as people around the world. While the political environment and cultural context may produce differences in how people respond to the pandemic at the societal level, when we examined Chinese people's reactions at the psychological level, we found that their responses dealing with the external threat when facing such a great catastrophe were similar to those of people in other social contexts. Therefore, we validate a generally observed phenomenon that would be applicable elsewhere. This study is limited in its use of a student sample. However, the use of a student sample will not undermine its theoretical contribution. This study examines multivariate relationships about TPP. If a theory explains general human behavior, it should apply to and stand the test by observing different contexts. With the multivariate relationships in this study being rigorously tested, the findings of this study offer insights into the relationships among media exposure, social realism, proxy efficacy, and TPP.

Nevertheless, the present study has some limitations. First, this study focused on examining the relationship among media exposure, social realism, proxy efficacy, and TPP, which is the perceptual component of the third-person effect. Therefore, this study has not examined the behavioral component of the third-person effect. Future researchers should extend this research to examine how media exposure, social realism, proxy efficacy, and TPP affect health behavior. Another limitation came from the use of a sample of college students. Though the findings offer insight into a social interaction process about media effects in a pandemic, the student sample limits the ability to generalize the findings to the general public because college students may differ from the general public in their use of news media and in how they perceive the influence of pandemic news on themselves and others. Future research needs to use a national representative sample to determine how media exposure, social realism, proxy, and TPP influence health behavior.

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