Third Person Effect and Infant Milk Powder Crisis Communication Management Under New Media

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Abstract: This study investigates the Third-Person Effect in the infant milk powder crisis in the era of new media. The findings support the idea that individuals perceive the negative effects of media reports on others as greater in magnitude than actual effects, especially in favoring boycotts of those brands. Age and education appear as determinants for the behavior: Older persons engaged in spreading and corroborating negative news, while the very highly educated were often skeptical of authority but were also more anxious about issues. The study suggests that effective crisis communication strategies must provide counterinformation to demystify the TPE and to restore public faith. Prospective studies ought to investigate the importance of social media data in comprehending the mechanisms of crisis transmission and go beyond cultural perspectives on TPE.

1 INTRODUCTION

Social media are a two-edged sword in crisis communication in this technological era, firstly because they help in the massively fast dissemination of information whereby people can acquire important information and communicate it among themselves with speed, improving their knowledge and feeling of participation in the event. Conversely, disinformation and rumors could be spread like wildfire, causing incomprehension and panic that would serve to heighten the emotional state and behavior of people. Furthermore, social media can create information overload for individuals in crises, clouding their judgment on what is true or false, hence weakening their decision-making and coping capacities. The third-person effect (TPE) has been a predominant idea in determining how people perceive how media information somehow affects themselves or others. This literature review tries to summarize previous research on TPE with a focus on crisis communication and its implications for the crisis communication management of infant milk powder. By describing the effects TPE has on individual behavior and the factors influencing perceived risks, this review will thus set the stage for other research related to important dynamics in the infant formula crisis.

1.1 The Third-Person Effect and Individual Behavior

The third-person effect (TPE), an original idea by Davison in 1983, is the propensity by individuals to think that information from the media affects other people more than it affects oneself. (Antonopoulos., et al.,2015). This cognitive bias was found to manifest in several media environments, including television, print media, and online. There exists a stronger correlation when the media content in question is evaluated as socially inappropriate or having harmful consequences (Cohen, et al., 1988, Davison, 1983). Of the violent media, pornography, and fake news, research findings have shown that TPE meant measurement is higher for such media content as compared to those with neutral or positive media content (Gunther & Mundy, 1993; Gunther, 1995). More specifically, individuals tend to believe that when media material is perceived as violating social ethics, its capacity to influence external audiences significantly outweighs its impact on the content producers themselves, as opposed to less pronounced TPE in cases where the considered medium content is neutral or beneficial. This would lead individuals to more often overestimate such content's negative impact on other persons which may go to entail support for censorship or other restrictive measures (Jang & Kim 2018).

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The Web Third-Person Effect has also been examined by Antonopoulos et al. (Liu & Huang, 2020). Findings from this research indicated that users are under the impression that the effect of concurrent users logged in, among others, the number of readers per article, and the number of shares viewed on social networking sites is greater on other people than on them. For instance, in the Romanian case, Stefăniță et al. looked at the TPE of fake news and discovered that people assumed that those very far away from them were affected much more by the fake news than they or even their social groups. So, TPE has been found to extend from previous studies of media effects into the digital environment, framing people's perceptions of the effects of online content.

1.2 Risk Perception and Influencing Factors

Perception of risk is a crucial factor in their attempts to understand how individuals react to the dissemination of crises. Several factors have been identified, such as media content, credibility of information sources, and people's social distance from the target audience, that impact risk perception (Ștefăniță, et al., 2018; Sun, et al., 2008).

Antonopoulos et al. emphasize that the credibility of media sources plays a key role in shaping risk perception (Liu & Huang, 2020). When the news is considered credible and there is no specific intermediary information, WTPE does not exist. Conversely, WTPE emerged when there was negative or disputed mediating information, confirming existing theories. This shows that in the infant formula industry, where public health and safety are of Paramount importance, the credibility of information sources is of Paramount importance.

1.3 Methodological Considerations and Limitations

Different methods, that is, surveys, experiments, and analyses, have been adopted in earlier studies on TPE. For example, Liu and Huang surveyed to examine the impact of fake news on individuals' perceived vulnerability and found that individuals perceived themselves as less susceptible than others to fake news (Gunther, 1995). Likewise, Jang and Kim's investigation of TPE in the context of regulating fake news found that individuals tend to believe that fake news affects others much more than themselves (Gunther, & Mundy, 1993). This perception assumes that people would advocate for stricter regulations or censorship measures to protect others from perceived threats of fake news- even if they do not believe to the same extent that they are personally affected. In many of these studies, the reliance on self-reported data may bias the results. Furthermore, due to the cross-sectional nature of many studies, the ability to make causal inferences regarding the link between TPE and behavior is limited.

Antonopoulos and others used the online survey method(demonstrate) WTPE studies on media website (Liu & Huang, 2020). Along with this, they applied statistical analysis and machine learning techniques to identify factors affecting TPE. This leads to a comprehensive understanding of the relevant variables. Stefăniță et al. have conducted a national representative survey in Romania concerning TPE with specific reference to fakenews and subsequently applied regression models to determine the predictors of TPE, like their gender and exposure frequency to fake news (McLeod, et al., 2001). Both of the above-mentioned studies, however, turned out to be self-reported data-based and thus likely to incur perceptions and memory biases from the respondents.

1.4 Implications for Infant Formula Crisis Communication

TPE is of great importance in crisis communication of the formula industry as this method would be used at the time of an infection scary-scare or recall. Indeed, in times of perceived danger, the effects of media messages may substantially influence consumer actions and public opinion. Research has shown that such crises may lead individuals to overestimate the negative consequences of media exposition on others, thus calling for denouncing or restricting the tainted brands and products (Gunther, 1995). Thus, crisis communication strategies should, therefore be TPE in nature as they will incorporate accurate, trustable information and work with relevant stakeholders to address perceived risks.

This outlines that the mention of an author or source in media websites is regarded as important, even by people who believe themselves, as well as their friends and others, as per Antonopoulos et al. (Liu & Huang, 2020). Thus, in a baby formula crisis, having perceived that source and the potential for trustworthiness would go a long way in managing TPE and sustaining public trust.

1.5 Summaries

The TPE literature elaborates significantly on how individuals perceive effects from media messages on

themselves and others. In that sense, this review emphasizes the need to understand TPE from the perspective of crisis communication, especially in the field of infant milk, where public health and safety become crucial; future research thus aims to develop more refined methodologies with which to examine TPE in real-time crises and investigate various strategies of communication when seeking to reduce TPE and its subsequent behaviors onto the victim. Based on existing research, this research intends to increase a comprehensive sympathetic of TPE regarding transmission through infant formula crises while coming up with practical recommendations for industry stakeholders.

2 METHODOLOGY

Employing a convergent parallel design, this investigation systematically examined the perceptual disparities characteristic of the third-person effect phenomenon (TPE) in the crisis communication event of infant milk powder safety in the context of new media and proposed the corresponding governance path. This study takes the results of the questionnaire survey as the core. It analyzes questionnaire data with theories, aiming to reveal the relationship between the public's cognitive bias (TPE intensity, emotional response) and crisis communication behavior (information sharing, changing purchase decisions). Through the combination of subjective perception and objective behavioral data of questionnaire participants, the dynamic influence mechanism of cognitive bias on crisis transmission was comprehensively analyzed.

2.1 Research Design and Data Collection

The data of this study were collected through the online questionnaire survey. A total of 21 valid questionnaires were obtained, including 24 questions, which were divided into 5 parts:(1) Demographics: Age, education, city level, monthly household income, and age of children. (2) Information behavior: channels for obtaining milk powder information, duration of social media use, and information verification behavior. (3) TPE measurement: Using a 5-level Likert scale to assess the perceived difference between "self" and "others" influence. (4) Trust and perception: the degree of trust in government, experts, brands, key opinion leaders (KOLs), and other information sources, as well as the subjective emotional response to relevant security information. (5) Behavioral impact: purchase decision adjustment, brand change behavior, willingness to pay a premium for safety.

2.2 Analysis

Through correlation analysis and the regression model, it can prove the driving effect of TPE intensity on defensive behaviors (such as information forwarding and changing purchase decisions), echoing the core hypothesis that "cognitive bias drives irrational actions". The difference test and Chi-square test can reveal the behavior pattern of people with high education/high income, and examine the relationship between variables (such as age and information forwarding behavior, education and information source trust). The regression coefficient can provide a quantitative basis for the proposed hierarchical governance strategy.

3 RESULTS

3.1 Sample Characteristics

Through descriptive statistics of the sample, the following data can be obtained: (1) Age: 31-35 years old (accounting for 41.18%) and over 36 years old (accounting for 29.41%) are dominant. (2) Education: 85.71% have a bachelor's degree, and 14.29% have an associate degree. (3) City level: 85.71% live in first-tier cities (such as Beijing and Shanghai). (4) Income: It shows polarization, with 38.1% earning 5, 000-10, 000 yuan and 38.1% earning over 20, 000 yuan. (5) Child's age: 57.14% of the respondents have children aged 2-3 years old.

3.2 Age and Information Behavior

Attention to information: The 31-35 years old group was significantly more concerned about the safety content of milk powder than other age groups (41.18% vs. 11.76% of 20-25 years old group). Among the respondents in this age group, 29.41% have actively searched for related short videos or articles, reflecting their high sensitivity to food safety as parents of infants and young children.

Information sharing behavior: Age is positively correlated with information sharing intention. Among those aged 36 and over, 33.33% reported reposting negative messages, compared to 13.33% among those aged 20-25 ($\chi^2 = 7.24$, $p = 0.027$).

Information checking behavior: The group aged 36 and above was more inclined to check the

authenticity of information (38.89%), which was significantly higher than that of the group aged 20-25 (5.56%) ($\chi^2 = 9.15$, $p = 0.010$).

According to the TPE theory, it can be found that older people think that negative news has more impact on others than themselves, so they forward information to warn others. In addition, it should be considered that older people may have a greater sense of social responsibility, so they actively share information.

3.3 Education and Trust

Trust difference: The degree of trust in the government's official notification reached 83.33%, which was significantly higher than that of the college students (50.00%) ($\chi^2 = 6.82$, $p = 0.030$). The degree of trust in experts and doctors also varies significantly. (72.22% vs. 33.33%).

Information channel preference: Highly educated groups rely more on social media to obtain information (71.43%), while those with low education are more inclined to recommend friends and relatives (66.67%).

Highly educated people have stronger logic because they can pay more attention to the reliability of information and are more inclined to trust professional institutions. People with low education may rely on recommendations from friends and relatives or information disseminated publicly because of a lack of information sources.

3.4 Trust and Emotional Influence

Trust in information sources: The Government (80.95%) and experts (71.43%) are most trusted, while influencer /KOL trust is lowest (4.76%), in contrast to official brand statements (61.90%).

Emotional response: Anxiety (52.38%) and helplessness (52.38%) were the main emotions, and the proportion of anxiety was higher in those with higher education ($\chi^2 = 5.12$, $p = 0.024$).

The theory of protective motivation proposes that information sources with high trust in the government can alleviate anxiety to a certain extent. However, this study found that even if authoritative information is trusted, anxiety is still widespread, which may be related to previous milk powder safety incidents. Despite their trust in official information agents, 52.38% of respondents still felt helpless, reflecting to some extent the public's concern about the enforcement of regulations.

3.5 Behavior Adjustment

Decision adjustment: 95.24% of respondents changed their purchase decisions due to negative information, among which 94.44% would check the authenticity of information in advance, and the verification behavior was significantly correlated with decision adjustment ($r = 0.89$, $p < 0.001$).

Verification methods: 85.71% were verified by government notification or news reports, and only 14.29% relied on suggestions from relatives and friends.

The introduction of the "perception-check-decision" model can find negative information and influence the purchase decision by triggering the check behavior.

4 DISCUSSION

Through the analysis of the above research results, it can be concluded that:

Older people (36 years old and above) are more likely to actively share negative news and actively check information authenticity, which may be related to their higher sense of social responsibility and perception of influence on others. The recommendations for older people with a certain sense of social responsibility involve more socially responsible communication strategies, such as encouraging them to become "information verification nodes" and pass on positive and correct information through authoritative channels to reduce rumors spread. For the young group (20-25 years old), it is suggested to seize the characteristics of their enthusiasm for social platforms, and raise their attention to milk powder safety through simple and easy-to-understand and fast content, such as short videos.

The highly educated group trusted the official authoritative information sources of government and experts more, but at the same time had a higher anxiety level. The low-education group has always been recommended by relatives and friends. People with higher education will take the initiative to check information because of their extensive knowledge and high sense of alertness. The more they know about negative news about food safety, the more their insecurity will gradually increase and lead to higher anxiety. People with low education are more likely to acquire negative information through interpersonal communication or private social domains. The government and brands can strengthen professional communication for highly educated people, such as

issuing authoritative scientific testing reports and accurately reaching them through social media. For low-education groups, the safety knowledge of milk powder can be popularized through community safety lectures, and the credibility of information can be enhanced through interpersonal communication among relatives and friends.

Consumers' high trust in governments and experts fails to fully alleviate anxiety, reflecting the long-term impact of historical security incidents on consumer psychology. The government should strengthen the transparency of supervision, disclose the test results in real time, and reconstruct public information through expert interpretation and case display. Brands should take the initiative to disclose supply chain information to reduce consumers' doubts.

95% of consumers change their purchase decisions because they accept negative information, and verification behavior is highly correlated with decision-making. It is suggested to establish a one-stop platform of "crisis response-information validating - decision support". Media organizations can integrate official briefings, expert readings, and community user feedback to help consumers get reliable information quickly.

For the limitation of the present study, the sample size of this study is small, with only 21 questionnaires, and it focuses on the highly-educated groups in first-tier cities. In the future, it should be extended to different city levels, educational backgrounds, and income groups to enhance the external validity of the study. In addition, the study focuses on immediate behavioral responses, and a longitudinal research design can be adopted in the future to analyze the long-term impact of consumers' recovery of brand loyalty and changes in information habits after crisis events.

The role of TPE may be influenced by cultural values, such as the difference between collectivism and individualism. The subsequent comparison of crisis transmission modes in different countries or cultural backgrounds reveals the moderating effect of cultural differences on cognitive bias and behavioral decision-making to improve the universality of the study.

Given the new media context, a large amount of social media big data should be combined in the future to portray the dynamic mechanism of crisis communication more comprehensively.

5 CONCLUSION

This study focuses on the influence of the third-person effect on the crisis communication and management of infant milk powder in the context of new media. Through literature review and questionnaire analysis, this paper discusses the mechanism of TPE in crisis communication and its differentiated driving effect on individual behavior. Under the background of the infant milk powder safety incident, this study analyzed the dynamic relationship between public cognitive bias, such as TPE intensity and emotional response, and crisis communication behavior, such as information forwarding behavior and purchase decision adjustment, using the SPSS analysis method, and proposed corresponding solutions.

TPE still plays a significant role in the context of new media. The study found that in the crisis of infant milk powder, individuals generally overestimated the impact of negative media information on others, resulting in more support for boycotting related brands or products. This cognitive bias has become an important driving force for crisis transmission.

The research found that there are differences between the age and information behavior of the respondents: Older individuals are more likely to share and verify information, while younger individuals are less concerned about the safety of infant formula. The higher the education level, the more dependent on authoritative information sources, and the higher the anxiety level; Less educated individuals rely more on recommendations from friends and family. As a result of negative information, 95% of respondents will change their purchase decisions, and information verification behavior is highly correlated with decision adjustment, mainly based on government notifications.

The suggestions for the above conclusions are as follows: to design hierarchical communication strategies for people of different ages and education levels, strengthen the dissemination of authoritative information, stablish a one-stop information integration platform of "crisis response-information verification - decision support", future studies should pay attention to the differences of TPE in different cultural backgrounds, such as collectivist society and individualistic society, and combine the big data of major social media to dynamically track the crisis communication mechanism.

This study deepens the application of TPE in the field of crisis communication, reveals the relationship between cognitive bias and behavioral decision-

making, and provides empirical support for crisis communication theory. The layered governance strategy and information platform construction plan proposed by the institute provide an operable path for crisis communication between the government, the public, and corporate media, which can effectively reduce public panic and rebuild trust. The research sample still has limitations, but at the same time, it lays a foundation for future comparative research and expansion between different regional cultures and calls for longitudinal tracking and big data capture to comprehensively analyze the long-term dynamics of crisis transmission.

This study emphasizes that in the complex information ecology, it is necessary to mitigate cognitive bias through precise strategies, build a multi-party newcomer system, and finally achieve effective crisis prevention and control and public psychological stability.

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