# Effect of Television News Viewing on Risk Perception: Focusing on the Coverage of Mad Cow Disease in South Korea

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**Abstract**

Mad cow disease has been considered the biggest issue in South Korea since 2008. Given the great concern, television news has played a key role in educating people about the issues related to mad cow disease. Therefore, this study examined how watching television news coverage of mad cow disease influenced risk perception of the disease. As theoretical background, uses and gratifications perspective and the cultivation theory were employed. A pilot study was conducted to define viewers' motivations for watching television news through a focus group. In the main study, a survey (N = 210) revealed that individuals motivated by information seeking perceived more risk toward the mad cow disease. Additionally, the viewing satisfaction and frequency of television news coverage of mad cow disease are positively associated with risk perception. These findings contribute to a greater understanding of television news audiences in terms of risk communication. The research implications and limitations are discussed for future research.

**Key Words:** mad cow disease; television news; uses and gratifications; cultivation theory; risk perception

## Introduction

In 2008, the import of beef from the US was one of the largest issues in South Korea. The spread of negative news about mad cow disease caused Koreans to worry about eating US-produced beef. This concern regarding the safety of US beef led to mass demonstrations against Korean imports of that beef. As a response, Koreans sought information on mad cow disease with television news playing an important role in conveying this information, particularly because it is the most common media format.

Studies of risk communication view "information use as a waystation on the road to understanding individuals' reactions to risks in their environment" (Griffin, Dunwoody, & Neuwirth, 1999, p. 230). This is because previous risk communication studies used the exposure to information as an important predictor of what people think about or how they perceive a particular risk (e.g., Wahlberg & Sjoberg, 2000; Wilson et al., 2004). These studies demonstrated that media play an important role in disseminating information that significantly influence the individuals' perception of the severity of the risk. Therefore, this study explores what motivate people to watch information on media, especially for television. In addition, we examine the relationship between attitude toward the media content and risk perception, by employing the issue of mad cow disease to better understand how people respond to messages about the risks associated with mad cow disease.

Two theoretical frameworks are employed: Uses and Gratifications (U&G) and Cultivation theory. First, U&G theory explains why people use media, which helps identify how people seek information through television news by providing a range of motivations for television news viewing. In addition, the cultivation theory developed by Gerbner, Gross, Morgan, and Signorielli (1986) suggests that watching television influences the viewers' perceptions significantly, and thereby audiences ultimately believe the world as presented by television. This theory helps understand how viewers' attitudes toward watching televised news coverage of mad cow disease impact their risk perception. Based on the theoretical background, the aims of this study are: 1) to explain which motivations for watching television news make changes in viewers' risk perception toward the issue of mad cow disease; and 2) to examine the relationship between attitudinal/ behavioral responses to watch television news about mad cow disease and perceived risk of mad cow

disease. Therefore, this study attempts to understand how people seekand react to the risk messages (e.g., mad cow disease) they receive daily from television news.

**The Issue of Mad Cow Disease**

These days, people face more and different types of risk compared to what they did in earlier times (Maibach, Roser-Renouf, Smith, & Dawson, 2013). In particular, people are paying increasing attention to issues related to health, the environment, and ethical food (Amin, Mahadi, Samian, & Ibrahim, 2013) because people have come to realize that the foods they consume have a direct impact on not only their own health and lives, but also their family and close friends. People have requested more information about food due to the more frequent food scares (Shim et al., 2011).

Among the issues regarding the risks associated with food, public fear on mad cow disease have been increased since the Free Trade Agreement (FTA) between the USA and South Korea (Kim, 2012). Many nations have also cited the seriousness of the disease and treated it as an important issue (Lee, Han, & Jun, 2009). In particular, food issues associated with mad cow disease have been politicized because they are central to trade liberalization.

In this context, mad cow disease and the import of U. S. beef became a significant issue in South Korea in 2008. The issues related to the import of beef from the United States were initiated in February 2006 during the Republic of Korea-United States Free Trade Agreement (also known as KORUS FTA). This issue became larger because it is the largest FTA for South Korea by far, and it is a health issue that is related to one element in the list of trade items, American beef. Although there has been a growing concern among the public regarding the expected health problems related to the import of beef, mostly regarding mad cow disease, as well as intensified pressure to stop the negotiations, in April 2008, the Korean government had agreed to import U.S. beef without issuing any prior notification or public discussion (Lee et al., 2009). As a result, various social activists and NGOs held a press interview and addressed their opinionson the government's decision and requested a safety verification of such imports. This rising public interest in the issue led to massive protests for several months. Tens of thousands of protestors now who were not only social activists and NGOs but also general citizens gathered in Seoul, the capital of South Korea, as well as in many other major cities to participate in candlelight vigils. Therefore, the initial issue of import beef from the United States was about foreign trade. On the other hand, mad cow disease increased the health concerns among the public who will probably consume American beef in the future. This became a huge social issue because of the massive angry protestors toward the government and new President.

**Coverage of Mad Cow Disease on Television News**

Many studies have explored the news coverage effects during a pandemic outbreak (Rim, Ha, & Kiousis, 2014; Shih, Wijaya, & Brossard, 2008; Wei, Lo, & Lu, 2007). For example, Rim et al. (2014) found the agenda building effect between health authorities' information subsidies and news coverage. On the other hand, they did not confirm that the salience of the severity information about H1N1 disease in newspaper coverage would affect public's risk perceptions.

However, most studies focused only on newspaper coverage. Other sources of pandemic risk-related message should be regarded as important information that the public consume during health emergency (Rim et al., 2014). It is true that fewer people use traditional forms of media, such as newspaper and television, than ever before because of the advent of new media (Cline & Haynes, 2001). Nonetheless, television is still used widely among the public because of its pervasiveness and technological advancements. Television news has evolved as the main source of information. Therefore, studies of television news are important methods for investigating the communication activities from the perspective of media effects.

**Motivations for Seeking Information on Television News: Uses and Gratifications (U&G) Perspective**

U&G is related to how people select media depending on their needs or motivations. This perspective emphasizes the role of audience activity. Before the advent of U&G, most communication studies focused on the effects of media on people, who were considered passive audiences. However, U&G suggests that the audience's viewpoint represents a shift from research focused on what the media does to people to questions of what people do with the media (Rubin & Perse, 1987).

The theory should be reviewed from a historical perspective to better understand why the theory came out. In this sense, the U&G perspective came from functionalist sociology, which explores the use of different media and is related to differences in the individuals' expectations and gratifications sought when using a particular media form (McQuail, 2000).

Based on earlier research regarding what people do with media, Katz introduced the U&G perspective in 1959, which changed the original media-centered approach into a use-centered approach. In that

year, arguments began forming that communication research would soon begin to die. Against this argument, Katz (1959) claimed that the focus of research should change from centering on the effects of the media on people to what people do with the media. In other words, this perspective is a reaction to traditional research focusing on the media's role. In particular, U&G suggested some avenues stressing the role of active audiences in media usage. First, U&G explains how people satisfy their needs through media use. Second, U&G attempts to uncover the individuals' motivations for using media. Finally, U&G demonstrates the results (i.e. gratifications) of the individuals' media use. Based on these assumptions, U&G has been used to explain the mass communication phenomenon related to how the audiences actively use media and satisfy their needs as a result.

To apply this perspective to mass communication activities, previous studies have explored the individuals' motivations for using mass media. Research has investigated numerous phenomena related to this topic, including the relationship between viewing television and gratification as well as the relationship between the television viewing attitudes and behaviors (Rubin, 1983). For example, Greenburg (1974) noted seven television-viewing motivations among a sample of children and adolescents: habit, relaxation, companionship, passing time, learning, arousal, and escape. Similarly, Rubin (1997) proposed seven motivations for television viewing: relaxing, education, communication utility, forgetting, passing time, companionship, and entertainment.

In terms of television news viewing, Rubin and Perse (1987) identified two news-viewing orientations: instrumental and ritualized use. Instrumental use refers to seeking information gratification and is positively related to the perceived news realism, affinity, intentionality, and involvement. In other words, instrumental use is more concerned with the news content. Therefore, the content delivered by television news can influence the audiences' thoughts, attitudes, and behaviors. Alternatively, ritualized use is defined as habitual and time-consuming viewing, which is negatively related to the news affinity and perceived realism. In particular, this orientation may limit the effects of the content delivered by television news. These arguments confirm that different motivations impact different levels of perception among audiences.

Therefore, this study expects that people exposed to television news coverage about mad cow disease have different motivations for television news viewing, and that each type of motivation influences the risk perception regarding the disease. This assumption led to the first research question:

*RQ1:* How do television viewing motivations influence the perceived risk regarding mad cow disease?

**Influence of Television News on Risk Perception: Cultivation Theory**

Cultivation theory, which was developed by Gerbner et al. (1986), focuses mainly on the effects of television viewing on people. This theory proposes that the use of television changes the people's perceptions and behaviors. Hence, cultivation effects are observed over a long period of time. This assumption came from the assertion that television plays a central role in American society. Gerbner et al. (1986) suggested that television was considered to be a storyteller by many family members. From this idea, Gerbner and his colleagues began in-depth cultivation research at the University of Pennsylvania.

Cultivation is defined as the effect of exposure to the messages provided by media (e.g. television) that teach people common values, roles, and viewpoints from society. Based on this concept of cultivation, the researchers originally proposed that heavy television viewers tend to believe in the world presented by television more so than light television viewers. For example, Gerbner and Gross (1976) conducted a survey asking the participants to estimate the percentage of the world's population living in the United States. They reported that heavy television viewers overestimated the percentages more than light television viewers because Americans were the dominate characters in television programs at that time compared to other ethnic groups, which led viewers to conclude that Americans comprised a larger percentage of the world's population.

From this original notion of the cultivation effect, recent cultivation theory has been developed and suggests two types of cultivation effects: first-order and second-order beliefs (Gerbner et al., 1986). First-order beliefs suggest that people tend to overestimate the facts presented on media similar to the original research approach. In other words, first-order effects refer to the general attitudes toward the everyday world around us. On the other hand, second-order beliefs are defined as the beliefs related to specific values or attitudes, such as personal safety. These beliefs are also different in heavy and light viewers. In other words, heavy viewers who watch a great deal of television are affected more by the messages presented by the television programs than light viewers, particularly when heavy viewers have little experience with the topics of these programs. These assumptions allowed cultivation-effect research to provide more enriched interpretations of the mass

communication phenomena at the personal and social level (Severin & Tankard, 2001).

From a theoretical perspective, cultivation theory has shown that television has an influence on the audiences' perceptions (Gerbner & Gross, 1976). As a representative example, crime news has a rather strong effect on viewers. Romer, Jamieson, and Aday (2003) proposed that television news can also shape the audience perceptions. They argued that the coverage of crime increases the fear of crime. Consistent with this argument, previous research suggested some predictors associated with the fear of risk through mass media (e.g., Balzarotti, &Ciceri, 2014; Lin &Lagoe, 2013). Rubin (1983) proposed television-viewing attitudes that include behavioral response (i.e. frequency of viewing) and affective response (i.e. watching satisfaction and message reality). Through his study, Rubin identified the relationship between motivation for watching television and viewing attitudes. In addition, McCallum, Hammond, and Covello (1991) examined the public health issues related to environmental risk communication. Their study emphasized that the credibility of the information source is the most important aspect of health information processing,

In addition, television news, as a public media, can shape the people's perceptions. In particular, Bryant and Thompson (2001) suggested that television news reports of crimes are likely to cause anxiety, fear, and worries about the environment. Therefore, some people have examined the relationship between viewing television news and the changes in the people's perceptions toward news messages. For example, Donder, Verte, and Messelis (2005) examined the causes of the fear of crime, and found that the more a person watches television news, the higher his or her levels of fear. In this sense, viewing crime news is positively related to the perception of risk. Woo (2006) proposed that dangerous situations that people have experienced often are more fearful than those they have not experienced. That is, viewers are generally more worried about the dangers that they were familiar with, such as food safety risk, car crashes, crimes and violence, as opposed to those that they are less familiar with. Thus, television news related to the risk of daily life is likely to have a strong impact on the viewers' risk perception.

Consistent with this view of cultivation theory, Lee, Han, and Jun (2009) explored the people's responses to mad cow disease after the emergence of the issuesrelated to US beef imports in 2008. They reported that the perceived risk of mad cow disease increased and that the respondents were unwilling to purchase US beef. As a determinant of the perceived risk of mad cow disease, they examined the role played by the information source. In addition, Gentzkow and Shapiro (2004) examined the factors that influence anti-American sentiment in the Middle East and learned that the source of information influences the audiences' perception. In the same context, Smith, Young, and Gibson (1999) suggested that information-delivering media is strongly involved in food scares. Macintyre, Reilly, Miller, and Eldridge (1998) examined how the public understands and reacts to media messages regarding the risks of eating certain foods using focus groups. They reported that the interpretation of media information had a significant impact on the food choice. These studies confirmed that the media play a key role in communicating between information providers and consumers.

Furthermore, Rubin (1983) proposed television-viewing attitudes that include the behavioral response (i.e. frequency of viewing) and affective response (i.e. watching satisfaction and message reality). He identified the relationship between the motivation for watching television and viewing attitudes. On the other hand, the present study expects that the attitudinal response to watching the television news coverage of mad cow disease will influence the perception of risk. In addition, McCallum et al. (1991) examined the public health issues relative to environmental risk communication. Their study emphasized that the credibility of the information source is the most important aspect, and specifically explained that "an individual's perception of the credibility of the source of a risk message is a key factor in understanding that person's response to the message" (McCallum et al., 1991, p. 351).

In summary, the frequency of viewing, watching satisfaction, message reality, and source credibility were considered in the present study to determine how people react to risk messages regarding mad cow disease. In particular, this study examined how the responses to television news coverage of mad cow disease will influence the risk perception associated with that disease. This led to the second research question:

> *RQ2:* How will a) satisfaction with television viewing; b) perceived reality; c) media credibility; and d) frequency of watching television news coverage of mad cow disease influence the perceived risk of mad cow disease?

## Method

### *Sample selection and procedure*

This study consisted of a pilot study and main study. For the pilot study, a focus group was organized to examine what motivates the audiences to watch

television news. Wimmer (2006) explained that focus group interviews allow researchers to gain deeper insights into the research subjects by sharing their thoughts and attitudes. In the present study, 15 undergraduate students, ranging in age from 19 to 25, participated in the focus group. All were enrolled at a large university in Korea. Of note, the members of the focus group were different from the subjects who participated in the main survey. A graduate student knowledgeable in communication and focus group research methods served as a moderator for the focus group. Upon arrival at the focus group's meeting room, the participants were informed of their rights as participants. They were then asked to share their motivations for watching television news. The findings from the focus group were used to design the survey instrument. Questions regarding motivation for watching television news that were used in previous studies were also reviewed and adapted for this study (Rubin & Perse, 1987).

In the main study, the present research used a self-administered questionnaire to explore the research questions and the survey questionnaire was distributed to adults in South Korea. Of the 237 questionnaires collected, 27 incomplete responses were excluded from subsequent analysis. The ages of the remaining 210 participants ranged from 20 to 76, with a mean age of 42. The number of male (50.0%, n=105) and female (50.0%, n=105) participants was equally distributed. In terms of television usage, the respondents spent an average of 2.23 hours per day watching television, and an average of 1.63 hours per day watching television news.

**Conceptual Measures**

The main study included questions derived from the literature regarding the motivations for watching television news, attitudinal responses to television news viewing (i.e. watching satisfaction, message reality, media credibility, and frequency of television news viewing), and the perceptions about the risk of mad cow disease. All questions concerning these variables were measured using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). In addition, the reliability was measured using Cronbach's alpha, and all values were above the recommended threshold of 0.6 (Malhotra, 1993).

***Motivations for watching television news***

The focus group noted seven specific motivations for watching television news: "I watch television news because I want to know what is going on"; "Because information from television news helpsdetermine my decision"; "Through watching television news, I can obtain information related to my specific interest"; "I usually talk to people about issues delivered by television news"; "I pass time by watching television news"; "I do not change the channel after I finish watching my favorite program"; and "Those watching television with me want to watch television news."

Exploratory factor analysis using the Varimax rotation was run for the seven items and generated two factors that accounted for 58.69% of the total variance. All items satisfied the evaluative criteria, which indicateda factor loading of more than 0.3 (Singh, 1991). In addition, each factor had an eigenvalue above 1.0, and the Cronbach's alphas were 0.74 and 0.63, respectively. The first factor, "information seeking," accounted for 32.72% of the variance among the four items. The second factor, "non-information seeking," consisted of three items and explained 25.97% of the variance. These items were developed by Rubin and Perse (1987) and were modified for this study. Consistent with their study, the first factor is related to the instrumental use while the second is linked to the ritualized uses of television news. These two factors were included in the survey instrument.

***Attitudinal response to television news viewing: watching satisfaction, message reality, media credibility, and frequency of viewing***

Rubin (1983) suggested that the attitude toward television viewing is an important variable for exploring the audience's perception of the content provided by television. To determine how the attitudinal response impacts on risk perception, the attitudinal response employed four variables that were reviewed from previous studies. In particular, watching satisfaction included the three items developed by Rubin (1983) (e.g., "Television news has satisfied the need for current information"). Three items regarding message reality were adapted from Potter (1986) (e.g., "I feel I can learn a lot about people from watching television news"). In terms of media credibility, McCallum et al. (1991) proposed the following three items: trust, accuracy, and balance. All variables were measured using a 5-point bipolar scale, and the Cronbach's alpha coefficients for each were .69 (watching satisfaction), .65 (message reality), and .87 (media credibility). Finally, the average daily frequency of watching crime was measured using a 5-point bipolar adjective scale (none/very frequent).

***Risk perception***

The questions about risk perception associated with mad cow disease queried people about how they responded to the fear of the disease and their concern for food safety in cognitive and affective ways. This scale

includes five items such as "If US beef were to be imported, compared to domestic beef" and "I believe the chances of being infected by mad cow disease will increase." These items were measured using a 5-point bipolar scale, and the Cronbach's alpha coefficient was .89.

**Results**

The first research question asked how the motivation for television news viewing influenced the perceived risk of mad cow disease. To answer this question, multiple regression analysis was conducted on motivation and risk perception. The results indicated that the equation is statistically significant (F = 10.131, $p$ < .001), and that 8.9% of the variance in the perceived risk of mad cow disease is explained statistically by a single variable. Information seeking provided a significantly positive impact on the perceived risk of mad cow disease (β = .29, $p$ < .001). In contrast, the risk perception was not predicted by non-information seeking (β = - .06, $p$ = .38). This suggests that the more people are motivated by information seeking, the greater their perceived risk of mad cow disease.

**Table 1** *Multiple regression analysis of the perceived risk of mad cow disease with the different motivations for watching television news*

| Dependent variable: perceived risk of mad cow disease | | | | | |
|---|---|---|---|---|---|
| Motivation factors | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | B | Std. error | β | | |
| Information seeking | .30 | .07 | .29 | 4.28 | .00 |
| Non-information seeking | - .07 | .07 | - .06 | - .88 | .38 |

*F = 10.13 (p< 0.001); R = .30; $R^2$ = .09; Adjusted $R^2$ = .08*

The second research question sought to examine how the attitudinal response (i.e. satisfaction with television viewing, perceived reality, and media credibility) and the frequency of watching television news coverage of mad cow disease influenced the perceived risk of that disease. The regression results in Table 2 show that the equation is statistically significant (F = 11.83, $p$ < .001), and that 19% of the variance in the perceived risk of mad cow disease can be explained statistically by two variables. In particular, risk perception was predicted significantly by the satisfaction (β = .17, $p$ < .05), as was the frequency of watching television news (β = .33, $p$<.001). Therefore, the more satisfied the subjects are with watching television news coverage of mad cow disease, the greater their perception will be regarding the risk of that disease. In terms of the behavioral response, the more often people watch television news coverage of mad cow disease, the greater their perception about the risk of that disease. A comparison ofthe beta weights between satisfaction and the frequency of watching television news showed that frequency is positively associated with the risk perception more than satisfaction because the beta weights indicate the size of the regression effect. On the other hand, the message reality and media credibility were not significantly related to the perception of risk.

**Table 2** *Multiple regression analysis of the perceived risk of mad cow disease with the attitudinal and behavioral response*

| Dependent variable: perceived risk of mad cow disease | | | | | |
|---|---|---|---|---|---|
| Variables | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | B | Std. error | β | | |
| Satisfaction | .17 | .08 | .17 | 1.99 | .04 |
| Message reality | .06 | .08 | .06 | .70 | .49 |
| Media credibility | - .06 | .08 | - .07 | - .81 | .42 |
| Frequency of television news coverage of mad cow disease | .28 | .06 | .33 | 4.49 | .00 |

F = 11.83 ($p$< .001); R = .43; $R^2$ = .19; Adjusted $R^2$ = .17

**Discussion**

This study examined the way people seek, process, and react to risk messages presented on television news. In particular, this study focused on the television news coverage of mad cow disease using a sample of South Korean adults. In particular, the current study was conducted in 2008, when mad cow disease was the most significant issue in South Korea. In this context, the study identified two research questions regarding the relationship between viewing television news coverage of mad cow disease and risk perception. To learn the answers, U&G and cultivation theories were used. Although these theories have already been applied in many studies about media use, particularly the use of traditional media (i.e. television and newspapers), the theoretical perspective also explained the effectiveness of the media in recent years. Therefore, some of the results obtained from this study support the previous outcomes.

To answer the first research question, the initial step was to convene a focus group that would identify the motivations behind watching television news in recent years. The motivations identified during the pilot study were similar to the results reported by Rubin and Perse (1987). Here, the two motivations cited for watching television news were information and non-information seeking.

In the next step, the present study conducted multiple regression analysis to reveal the effects of the different motivations on risk perception. Information seeking alone was found to have a significantly positive influence on risk perception. In other words, individuals who seek information through television news are more likely to perceive a greater risk of mad cow disease than those who do not. This suggests that people who actively seek or are strongly involved in the risk messages presented on television news are likely to perceive the risk of mad cow disease as being more serious, as indicated in a contextually similar study conducted by Griffin, Dunwoody, and Neuwirth (1991).

The second research question asked how the attitudinal response (i.e. satisfaction with television viewing, perceived reality, media credibility, and frequency of watching television news coverage about mad cow disease) influenced the people's perceived risk of that disease. The results indicated that the satisfaction and frequency of watching television news coverage of mad cow disease have a significant positive association with the perception of risk regarding the disease. This suggests that the more satisfied people are with watching television news coverage of mad cow disease and the more often they watch such coverage, the greater their perception of the risks associated with that disease will be. In particular, the frequency of watching television news coverage of mad cow disease has a larger influence than the satisfaction of watching television news on risk perception. This supports the cultivation theory, which holds that exposure to larger amounts of information increases the risk perception.

On the other hand, message reality and media credibility had no significant impact on risk perception. As a possible explanation, the subjects may not care about the message reality and media credibility when they watch television news coverage of mad cow disease. Nevertheless, the results could be different than those in this study if another topic related to risk environment is used.

Based on these findings, the present study suggests that television news still plays an essential role in delivering messages and influencing people's perceptions. Therefore, television news is likely to remain useful for delivering campaign messages regarding the health risks provided the messages are delivered as frequently as television news reports on the risk. Researchers and practitioners should understand the interaction between the message delivered by television news and audiences' motivations and information processing techniques to better understand and predict their responses to risk messages.

**Limitations and Future Research**

This study made significant contributions but there were several limitations, which offer some directions for future research. First, there was a limitation in terms of generalizability. The results obtained were not representative of the entire Korean audience because the participants were taken from particular towns. Therefore, future studies should include a larger number of towns to yield a more complete study.

In addition, although this study used several variables to examine the effects of television news viewing on the risk perception, other factors can also influence the people's perception regarding the risks of mad cow disease. For example, personal variables could include the individuals' personalities as well as their involvement with mad cow disease, and some demographic variables may also be included. In the future, it would be interesting to compare the use of traditional media and new media in terms of their effects on risk perception.

Finally, this study used multiple regression analysis to analyze statistically the data collected. Further research will be needed to identify the causal relationships among motivation, attitude, perception, and behavior. This research should be conducted using advanced statistical tools, such as the Structural Equation Model.

**Conclusion**

The role played by television news is very important relative to the audiences' perception of the messages delivered by that media. In accordance with traditional media theories (i.e., U&G and cultivation theory), this study found that viewers perceived risk message (i.e., mad cow disease) as risky when they were motivated by information seeking. In addition, viewers' satisfaction with watching television news and frequency of viewing television news related to mad cow disease were positively associated with risk perception. This finding helps substantiate the effectiveness of television news and encourages television news providers to understand the audiences' attitudes, perception, and behaviors. In terms of the effects of the media on risk perception, this result should be related to the health and risk communication. Therefore, future studies into the television news coverage of risk messages could contribute significantly to a further understanding of media use.

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