

論文の内容の要旨

論文題目: INFLUENCE OF NEWS ARTICLES ON THE PUBLIC'S MOTIVATION
TO TAKE PREVENTIVE MEASURES DURING INFLUENZA PANDEMIC
(住民のインフルエンザパンデミック予防動機へのニュース記事の影響)

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Background and Objectives

Over the past few decades, the increased attention has been paid to health risk and crisis communication in health communication research. It is widely known that the mass media play an important role in this communication process. The purpose of this research was to explore the influence of the mass media on people's risk perception and motivation to take preventive measures during a public health crisis. The purpose of Study 1 was to describe the risk perception and media use among the general public and to explore a possible relation between them. The purpose of Study 2 was to analyze the content of the newspaper reports about a case of public health crisis (influenza pandemic) and to assess the extent to which they reported about preventive measures. Finally, Study 3 had two purposes. One was to evaluate how the threat appraisal, a combination of the perceived severity and the perceived vulnerability, would change by reading a series of news articles based on the protection motivation theory (PMT). The other goal was to assess how the news articles with and without a description of effective preventive measures influence people's protection motivation.

Study 1: Risk perception and media use

Methods

We performed an online survey on July 30 and 31, 2013 with 740 adult participants who registered as monitors in one of the largest online market research companies in Japan. Participants were asked about their perception about health-related risks: risk perception (how dangerous they perceive), risk anxiety (how worried they are), personal measures and social measures taken under non-crisis condition. Also, the frequency of the media access and utilization as information sources were asked in addition to socio-demographic variables. We conducted Mann-Whitney's U test to explore the differences in major variables by participants' characteristics and partial correlation analysis to examine the associations between the major variables, using IBM SPSS ver.21.

Results

The participants perceived more dangerous for the natural disasters than for the health-related risks such as infectious diseases and chronic diseases. The female participants were more worried than the males. The participants accessed less frequently to the non-mass media information sources such as the governments' and academic institutes' homepages, except for the direct talks with family, friends and acquaintances. Televised

sources including news, tabloid shows and information programs are significantly associated with greater risk anxiety. Meanwhile, the text sources such as news website and newspaper were significantly associated with higher likelihood of taking personal preventive measures.

Discussion

Our findings indicated that those with higher risk anxiety were more likely to take personal preventive measures. The study also confirmed that people relied heavily on the mass media as information sources and less frequently used the official information sources such as government homepages, suggesting that the importance of the mass media in the health risk communication process. Among the mass media, it is implied that the text media such as newspaper and news websites may be more influential in promoting the preventive measures than the televised information sources. On the other hand, the televised media are strongly associated with risk anxiety but not to personal measures. Based on these findings, we further explored how the text media reported a recent public health crisis.

Study 2: Actual presentation by mass media regarding influenza pandemic in 2009

Methods

We performed a content analysis of 2,237 articles in three nationwide Japanese newspapers on A/H1N1 flu pandemic in 2009. We used a χ^2 test to examine the differences in the topics by the five quarters from March 2009 to May 2010. IBM SPSS ver.20 was used.

Results

The content analysis revealed that 31.5% of the total articles appeared in May 2009. The most frequently covered topics were the governments and agencies actions (44.3%) followed by the transmission of flu (16.4%). The precautionary behaviors such as hands-washing and coughing manner (6.4%), and facial mask-wearing (8.4%) were less frequently covered. The number of articles about vaccine and vaccination was small and disproportionate weight was placed on the safety of the import vaccines rather than the effectiveness. In contrast, the articles about antiviral drugs disproportionately reported on the usefulness and effectiveness rather than the safety.

Discussion

This study showed that the topics related to the preventive measures were reported significantly fewer than the topics related to the factual information in the newspaper articles on influenza pandemic. It may indicate that even the text media, which is expected to be influential in promoting the personal preventive measures, does not report enough information about preventive measures that the individuals can take. Then, the next research questions of our study were to examine how the text mass media influence the public's motivation to take preventive measures based on the PMT.

Study 3: Influence of news articles on people's preventive motivation

Methods

Using the same sample of Study 1, we conducted an online RCT by assigning the 740 participants into two groups that read different newspaper articles. Outcome measures were perceived severity, perceived vulnerability, perceived response efficacy, and protection motivation, which are the constructs of the PMT. The participants in the both groups were asked to read 4 consecutive articles but the second and the fourth articles were differently manipulated between the groups (i.e. the experiment group read articles 1, 2a, 3, and 4a, while the control group read articles 1, 2b, 3, and 4b). Article 1 stated an outbreak of an imaginary flu in a distant foreign country. Article 2 introduced several preventive measures that an individual can take. Article 3 stated the first case in Japan. Article 4 introduced a vaccine development. The articles 2a and 4a for the experiment group reported the efficacy of the preventive measures, while the articles 2b and 4b for the control did not. Each participant first read an article and then answered to the outcome measures. The articles were created for this study, reviewed by a current journalist, and validated in a pilot study with 120 participants.

We used the mixed ANOVA to show an influence on the PMT constructs by time frame. Then, we used an independent t-test to examine the differences in the outcome measures between the groups. IBM SPSS ver.21 was used.

Ethical consideration

For Studies 1 and 3, we received an approval of Research Ethics Committee, Graduate School of Medicine and Faculty of Medicine, The University of Tokyo on March 22, 2013 (No. 10082). The participants were informed that the answers would be collected anonymously and would not be identified individually, should be voluntarily and can be suspended any time and without any compensation if a participant wishes. We confirmed their agreement by checking their clicks on the agreement tab on the online questionnaire. We also consulted with the legal department of Macromill, Inc. in order to satisfy with their ethical consideration.

Results

There was a significant influence on PMT constructs by time frame. There was no significant difference in the perceived response efficacy and the protection motivation between the two groups with or without the reporting of high-efficacy of the preventive measures.

Discussion

This experiment study was unique in that it showed a series of news articles according to the timeframe of the pandemic to examine its cumulative effects on people's risk perceptions and protection motivation. The study showed that news articles may influence people's perceptions of threat and coping appraisals. When the outbreak or the first case of an imaginary flu was reported, the perceived severity was high. The perceived vulnerability, however, was low when the flu was in a distant foreign country and became high when it came in Japan. The perceived response efficacy was low when there was no

statement of preventive measures and became high when the preventive measures were explained in details. It is noteworthy that the protection motivation showed a similar move to that of the perceived vulnerability.

Thus, the news articles in the beginning of crisis communication can manipulate the public's perceptions, though whether it reported the efficacy of the preventive measures didn't affect the response efficacy.

Limitations and future research

Several limitations should be noted in interpreting the results of these studies. First, the participants in Studies 1 and 3 were the monitors of an online market research company. They are daily Internet users and may not represent the general population in Japan. However, the participants of this research would become a representation of the future population, considering the fact that the ICT development would increase the number of the Internet users. Another limitation of the online survey was that we were not sure how thoroughly the participants read the news articles. Although the survey system confirmed that the news articles were clicked to open, the actual time spent to read the articles is not known. In a real life, however, people often read the news articles in a limited time without paying full attention. Thus, this experiment might be a plausible situation.

Conclusions

In conclusion, the risk anxiety is related to the televised media while the personal measures are related to the text media. In the real case of A/H1N1 flu pandemic, the newspapers reported more factual information, while the information about the preventive measures was less frequently reported despite its importance for the public. This research found that text mass media reporting could influence the protection motivation by affecting the public's risk perceptions, especially the perceived vulnerability and the perceived response efficacy.