

# The Usage and Credibility of Information Sources for Cancer Prevention

## Cases of American and South Korean Women\*

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### Abstract

This study investigated the types of information sources related to women's cancer that have been used and perceived as credible by women in two culturally different countries: South Korea and the U.S. For this purpose, an online survey was conducted with 330 American and 317 South Korean women. Results revealed significant differences between South Korean and American women not only in popular and major information sources for women's cancers, but also in the levels of credibility that the respondents placed on each information source. It was also found that cancer information via human channels was perceived as more credible than that of media channels in both countries. Based on the findings, several implications for planning and executing effective communication strategies to deliver cancer-related information to target women were discussed.

**Key words:** cancer prevention, cultural difference, information source, source credibility, women's cancer

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## Introduction

Cancer rates among women have been steadily growing in many parts of the world. The American Cancer Society (2018) estimated that in 2018, approximately 266,120 new cases of invasive breast cancer will be diagnosed in women and more than 40,000 women will die from breast cancer in the U.S. alone. With regard to methods of reducing cancer mortality, many experts have indicated that people should first familiarize themselves with a variety of accurate cancer-related information (Johnson & Meishcke, 1992; Lee, Ho, Chow, Wu, & Yang, 2013). A high level of health literacy could allow people to initiate and maintain diverse health behaviors, such as getting regular medical check-ups, which is one of the most effective ways to decrease mortality rates associated with women's cancers (Juon, Seo, & Kim, 2002; Park, 2018; Pearlman, Clark, Rakowski, & Ehrich, 1999). Therefore, the planning and execution of health communication campaigns that encourage as many women as possible to undergo regular cancer screening would be one of the essential parts of accomplishing the ultimate goal of decreasing the death rate associated with women's cancers.

While this level of incidence exists in many countries, there are potential differences with regard to how people manage this situation (Kreuter & McClure, 2004). For example, cultural and/or ethnic differences in individuals' preventive behaviors regarding women's cancers could result in serious disparities in cancer mortality (Han & Jo, 2012; Lee et al., 2013). If we believe that women's engagement in appropriate preventive behaviors can be instigated primarily by obtaining proper cancer-related information and means of effective prevention, it is worthwhile to investigate how people from different cultures obtain and apply this information in their lives.

Considering such a research need, this study examined the information sources that aim to prevent women's cancers from a cross-national perspective by comparing the perceptions and intentions of American and South Korean women. Despite considerable efforts to investigate the effect of cancer prevention messages targeting women (e.g., Han & Jo, 2012; Lee, Kim & Han, 2009; Pearlman et al., 1999; Ramirez, Suarez, Laufman, Barroso, & Chalela, 2000), there is very little literature and data on the sources of such cancer-related information. The results of this research are expected to provide meaningful implications not only for understanding cross-national differences in women's most common and credible sources that deliver cancer-related information, but also for the kind of sources that would be effective for cancer-prevention messages targeting women in health promotion.

## **Literature Review**

Information sources have been explored and discussed by several studies to ascertain more effective methods for planning health communication programs, mass media strategies, and other communication efforts (Johnson & Meishcke, 1992; Michael & Cheuvront, 1998; Song, Omori, Kim, Tezzek, Hawkins, Lin, Kim, & Jung, 2016). Channels can be identified as integral factors that should be differentially proposed and planned, depending on the specific type of individuals targeted by the campaign (Kreuter & McClure, 2004). Different meanings could be ascribed to channels in strategic communication, including diverse media alternatives (e.g., TV, radio, newspaper, the Internet) and forms of communication. For example, channels mainly produced by human beings with or without technological assistance—such as

conversations between people, group discussions among colleagues, advice from an expert or an acquaintance, and participation in related workshops—can be crucial pathways of information, defined as “human channels.” Human channels are as important as a variety of media channels across many areas of health communication (Webel & Higgins, 2012).

Regarding source credibility, which is one of the most commonly discussed issues in developing health communication strategies (Kim, 2018; Shavitt, Lowrey, & Haefner, 1998), several researchers have discussed information sources that could guarantee credibility in specific situations (Greer, 2003). For example, individuals generally find messages that originated from regular news programs to have higher credibility than dramatized content in advertising. In other words, although messages promoting early screenings for women’s cancers contain identical information content, people report attitudes that are more positive to messages from TV news programs than from dramatized public service announcements (Lafferty & Goldsmith, 1999). However, results of studies on the effect of different information sources used in health communication have not been consistent; therefore, additional studies on specific health issues are clearly needed (Yu & Cude, 2009). Information sources have been examined alongside cultural differences and found to possibly result in different communication effects (Paek, Yu & Bae, 2009).

Some studies have emphasized the importance of culture when it comes to public communication with the object of reducing mortality from women’s cancers (Han & Jo, 2012; Jeon, Seo, & Kim, 2002). To plan and execute more effective health promotion that encourages early screenings to prevent women’s cancers, considering diverse characteristics of communication targets as important variables could be a key to success

(Kagawa-Singer, Padilla & Ashing-Giwa, 2010; Lee, Kim, & Han, 2009). While the differences in the incidences and mortality rates of women's cancers in many countries cannot be solely associated with cultural diversity, research has indicated that relationships between cancer outcomes and beliefs, attitudes, and behaviors related to prevention and screening could be explained by different cultures (Kagawa-Singer et al., 2010). In addition to health-related behaviors and issues, differences in culture and nationality have been considered as very critical variables regarding how we could interpret the results of diverse cross-national studies (Kim & Aubrey, 2015; Lee et al., 2014; Oh et al., 2014). Also, several typologies (e.g., individualism and collectivism) suggested and developed by Hofstede (2001) have been popularly and well accepted as important theoretical concepts for understanding the insights of studies dealing with diverse aspects of cultural differences.

Based on the above review, this study assumed that American and South Korean women would differ in their attitudes and behaviors regarding information sources of women's cancers. Accordingly, the following research questions were posed to ascertain the effects of communications from different information channels and in different cultures.

**RQ1.** How do American and South Korean women differ in their most frequent sources of information of women's cancers?

**RQ2.** How do American and South Korean women differ in the level of perceived credibility of each information source of women's cancers?

**RQ3.** How do American and South Korean women differ in the level of perceived credibility of media channels vs. human channels as information sources of women's cancers?

**RQ4.** How do American and South Korean women differ in their intentions to undergo early cancer screenings after exposure to information about women's cancers through media channels vs. human channels?

## Methods

The sample for the current study consisted of women from the U.S. and South Korea. North American and East Asian countries have often been chosen for cross-national comparative studies that investigate cultural effects across diverse fields (Kim, Kasser, & Lee, 2003; Lee & Shinkai, 2005; Nomura, Yamaoka, Nakao, & Yano, 2005; Ohtaki, Ohtaki, & Fetters, 2003). Additionally, in terms of the dimensions of individualism-collectivism, uncertainty avoidance, long-term orientation, neutrality-affectivity, universalism-particularism, etc., these nations were considered as proper cases of cultural differences (Hofstede, 2001; Trompenaars & Hampden-Turner, 1998). Survey respondents chosen for this study were women aged 30 to 59, because women in this age group are generally vulnerable to cancer and are, therefore, typically the primary targets of promotions aimed at preventing cancer-related illness and death (American Cancer Society, 2015).

Participants of the online survey were randomly selected from the registered U.S. and Korean consumer lists of a global research company. They consisted of 330 American women and 317 Korean women. The result of a chi-square test ensured that

age distributions of the respondents were equivalent on the whole across the two countries ( $p > .05$ ). Table 1 shows the demographic features of the survey respondents. All participants had completed the informed consent process before they started filling out the survey.

**Table 1.** Demographic Characteristics of Survey Respondents

| Category         | US  | South Korea | Total | Percent |
|------------------|-----|-------------|-------|---------|
| Age Group        |     |             |       |         |
| 30–39            | 109 | 110         | 219   | 33.9    |
| 40–49            | 110 | 105         | 215   | 33.2    |
| 50–59            | 111 | 102         | 213   | 32.9    |
| Occupation       |     |             |       |         |
| Housewife        | 96  | 148         | 244   | 37.7    |
| Company employee | 96  | 78          | 174   | 26.9    |
| Self-employed    | 32  | 26          | 58    | 9.0     |
| Professional     | 32  | 35          | 67    | 10.3    |
| Services         | 23  | 17          | 40    | 6.2     |
| Other            | 51  | 13          | 64    | 9.9     |
| Total            | 330 | 317         | 647   | 100.0   |

**Note:** Gender of all respondents is female.

The survey questionnaire contained items assessing the variables of interest, which included the most frequent information sources of women’s cancers (mainly breast and cervical cancers). Participants were also asked to indicate their experience and perceived credibility of each of the diverse media channels (e.g., TV programs, TV ads, newspaper articles, and newspaper ads) and human channels (e.g., medical doctors, family members, and colleagues) using a five point Likert scale. Finally, behavioral intention after potential exposure to specific information sources of women’s cancers was measured using a single question that asked the intention of taking early examinations for women’s cancer in the future.

## Results

The results of the analysis of the most frequent information sources of women's cancers (RQ1) showed statistically significant differences between American and Korean women. For American women, the most frequent information source was medical doctors, followed by magazine articles, family members, TV programs, and Internet articles. A different ranking was observed among Korean women: Their most frequent information source was TV programs, followed by Internet articles, newspaper articles, and friends/colleagues. A series of chi-square test results indicated that Korean women obtained women's cancer-related information via TV programs, newspaper articles, and Internet articles more often compared to American women. On the other hand, medical doctors, family members, TV advertisements, and magazine articles were the primary information sources for American women more often than for Korean women (see Table 2).

**Table 2.** Major Sources of Women's Cancer Information

| Source type        | US  | South Korea | Difference | $\chi^2$ | Sig. |
|--------------------|-----|-------------|------------|----------|------|
| TV programs        | 93  | 149         | -56        | 23.17    | .000 |
| TV ads             | 69  | 41          | 28         | 7.67     | .004 |
| Newspaper articles | 63  | 99          | -36        | 12.01    | .000 |
| Newspaper ads      | 16  | 13          | 3          | 0.24     | .381 |
| Magazine articles  | 105 | 53          | 52         | 20.74    | .000 |
| Magazine ads       | 39  | 14          | 25         | 12.09    | .000 |
| Radio programs     | 18  | 11          | 9          | 1.57     | .144 |
| Radio ads          | 14  | 1           | 13         | 11.17    | .001 |
| Internet articles  | 81  | 108         | -27        | 6.53     | .007 |
| Internet ads       | 20  | 17          | 3          | 0.17     | .401 |
| Family members     | 99  | 37          | 62         | 33.60    | .000 |
| Friends/Colleagues | 71  | 79          | -8         | 0.87     | .199 |
| Medical doctors    | 195 | 47          | 148        | 137.65   | .000 |

Regarding differences in the credibility that women ascribed to specific information sources of women's cancers (RQ2), some similarities between the two countries were found. For both American and Korean women, the most credible information source was medical doctors, followed by family members and friends/colleagues. Newspaper articles were also perceived as a credible source by the respondents in both countries, while magazine articles for American women and TV programs for Korean women were perceived to be credible. On the other hand, advertisements in any medium were perceived to be relatively less credible by women from both countries (see Table 3).

**Table 3.** Source Credibility for Women's Cancer Information

| Source Type        | Mean/<br>US | Mean/<br>South Korea | t     | Sig. |
|--------------------|-------------|----------------------|-------|------|
| TV programs        | 3.36        | 3.84                 | -8.59 | .000 |
| TV ads             | 2.98        | 3.20                 | -3.46 | .001 |
| Newspaper articles | 3.56        | 3.80                 | -4.31 | .000 |
| Newspaper ads      | 3.02        | 3.07                 | -0.75 | .452 |
| Magazine articles  | 3.61        | 3.30                 | 5.34  | .000 |
| Magazine ads       | 2.99        | 2.90                 | 1.49  | .137 |
| Radio programs     | 3.34        | 3.50                 | -2.97 | .003 |
| Radio ads          | 2.93        | 3.02                 | -1.50 | .134 |
| Internet articles  | 3.49        | 3.50                 | -0.23 | .815 |
| Internet ads       | 2.89        | 2.98                 | -1.39 | .164 |
| Family members     | 3.90        | 3.99                 | -1.56 | .120 |
| Friends/Colleagues | 3.86        | 3.89                 | -0.47 | .637 |
| Medical doctors    | 4.53        | 4.27                 | 4.74  | .000 |

For the tests of RQ3 and RQ4, the researchers categorized family members, friend/colleagues, and medical doctors into "human channels" and the other 10 sources into "media channels." Results on the comparable credibility ascribed by the respondents to media channels versus human channels (RQ3)

confirmed that the latter were perceived as more credible than media channels in both countries, and the differences between the two types of sources were statistically significant. In addition, t-test results of the comparison by country revealed that Korean women perceived media channels to be more credible than did American women, whereas differences in the credibility of human channels were not significantly different between the two countries (see Table 4).

**Table 4.** Credibility of Media Channels vs. Human Channels for Cancer Information

| Source Type    | Country     | <i>M</i> | <i>SD</i> | <i>t</i> | Sig. |
|----------------|-------------|----------|-----------|----------|------|
| Media channels | US          | 3.22     | 0.66      | -2.01    | .045 |
|                | South Korea | 3.31     | 0.53      |          |      |
| Human channels | US          | 4.10     | 0.69      | 0.97     | .332 |
|                | South Korea | 4.05     | 0.540     |          |      |

Finally, American and Korean women's intentions to actually undergo early screenings for women's cancers based on their experience of receiving information through media versus human channels were compared (RQ4). Both American and Korean women were significantly influenced by the experience they had with human channels. The more frequently the participants from two countries received information from human channels, the stronger were their intentions for early screenings in the future. However, a significant difference was found in terms of the influence of media channels: More experience with media channels led to the stronger intention to undergo early screenings for Korean women, whereas this impact was statistically insignificant for American women (see Table 5).

**Table 5.** Behavioral Intention by Experience with Media Channels vs. Human Channels

| Country     | Source Type    | <i>B</i> | <i>SE</i> | $\beta$ |       | Sig. |
|-------------|----------------|----------|-----------|---------|-------|------|
| US          | Media channels | -.051    | .030      | -.102   | -1.67 | .096 |
|             | Human channels | .388     | .065      | .368    | 6.00  | .000 |
| South Korea | Media channels | .064     | .025      | .149    | 2.55  | .011 |
|             | Human channels | .193     | .054      | .209    | 3.57  | .000 |

## Conclusions and Discussion

This study found significant results regarding the most frequent sources through which American and Korean women received women's cancer-related information, and the perceived credibility of the sources across cultures. In general, compared to American women, Korean women primarily received information regarding women's cancer via media channels, which included TV programs, newspaper articles, and Internet articles. TV programs were particularly important sources among Korean women. This trend differed from what was found among American respondents, for whom medical doctors and family members were the most frequent information sources.

In terms of cross-national similarities, both American and Korean respondents perceived information from human channels, such as medical doctors, family members, and friends/colleagues, to be more credible than that from media channels. It was additionally found that women's experience with human channels also led to stronger intentions to have early cancer screenings. These results suggest the importance of human sources as effective communication channels for delivering women's cancer-related information and the need for strategic uses of human channels.

In both countries, however, advertisements were generally perceived as less credible than other types of media content, including TV programs, newspaper articles, and Internet articles. This finding implies that advertising campaigns for women's cancer prevention should be developed with the intention of being more persuasive to the target audience. For example, public service advertising to recommend early screening behavior could be effective when employing the testimonial approach wherein by which a medical doctor provides professional advice.

All the results above indicate the coexistence of cross-national similarities and differences between the U.S. and South Korea in the health communication issues addressed in this study. Accordingly, culture seems to be somewhat inexplicit and puzzling in predicting effects on people's perceptions and behaviors, especially in the current age when global interactions are more invigorated than ever. Thus, careful consideration of cultural factors would be required in adopting communication approaches (e.g., media selection or message development) in foreign countries, or when planning international campaigns for women's health.

Several directions for future research can be suggested. First, as the next research step, experimental studies will be useful to investigate which specific channels could be more effective to a particular target audience and, thereby, to provide practical guidelines that are helpful for planning communication strategies. Second, in addition to cultural factors, some personal differences among women from the same country need to be considered and tested as potential determinants of reactions to cancer-related communication because it is highly possible for women to significantly differ in terms of their media usage, job status (e.g., full-time job, part-time job, housewives), perceptions of credibility of each media, and intentions for early check-ups,

depending on diverse personal characteristics. It is expected that such research efforts would contribute to protecting women from the risk of cancer incidence by assisting effective health communication.

As cultural effects are becoming increasingly difficult to predict, empirical investigations of cross-national phenomena seem to be critical for improving health-related practices and discussions. Also, marketers face more difficulty in persuading contemporary audiences due to rapid changes in people's lifestyle, media environment, and market situations. Therefore, it is hoped that the findings of the present study can draw marketers' attention to cultural effects and thus contribute to effective and successful public health promotion.

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