Consumer use of social media for food risk information: Survey findings in the United States and implications for the Korean context

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<Abstract>

Objectives: This study aimed (1) to share findings from the U.S. on customer use of social media for information seeking and sharing about food recall risks, and (2) to discuss the implications of the findings for the context of food safety and risk communication in Korea. **Methods:** A cross-sectional survey was conducted with 1,026 social media users aged 18 years or older in the U.S., recruited from the Knowledge Network's nationally representative panel. **Results:** About 26 percent of respondents used social media either to seek or share food recall information in the past year, with social networking sites being the most popular tool. With respect to social media use for information seeking, being married, perceived risk of getting foodborne diseases, and trust in Internet were significant, positive predictors; being Whites and trust in health professionals were negative predictors. Social media use for information sharing was positively associated with education, being married, foodborne disease history, and perceived risk of foodborne diseases; Whites, income, and trust in health professionals were negative predictors. **Conclusions:** The study gives theoretical, methodological, and practical implications for the context of food safety and risks in Korea.

Key words: social medial, information seeking, information sharing, food safety, food recalls

I. Introduction

Food safety constitutes one of the basic conditions for public health and well-being(Yoon & Kim, 2015). Despite the growing governmental efforts and public concerns on food safety in South Korea, however, the number of foodborne diseases has rarely decreased since year 2008(Hwang & Jung, 2015). Given both the high prevalence and high uncertainty of getting foodborne illnesses, e.g., 1 out of 6 Americans being sick each year whereas about 80% of the diseases resulting from unspecified agents(U.S. Centers for Disease Control and Prevention, 2011), it is crucial for consumers to access information about foodborne disease outbreaks and recalls through various communication channels. Many of the foodborne diseases are indeed preventable

by learning from timely information available through media(Hallman, Cuite, & Hooker, 2009), suggesting further research on media use in food safety and risk communication.

Previous research on food safety and risk communication in Korea has focused on three main areas. The first line of research has examined the ways of governmental and organizational reponses to food risks(e.g., Ju, Lim, Shim ,& You, 2015; Kim & Kim, 2015). Second, research has investigated consumer risk perception and attitude toward food-relevant issues(e.g., Lee, 2008, Yoon & Kim, 2015; You, 2013). Lastly, there has been research concerning the role of media, mostly analyzing its content or frames(e.g., Kim & Ban, 2012; Yang, 2015). Relatively little attention has been paid to consumers' actual use of media for food risk information.

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Social media are of particular significance in advancing research and practice in this field(Freberg, 2012; Gaspar et al., 2014; Jeong, Lee, Baek, & Shin, 2012; Kuttschreuter et al., 2014; Rutsaert et al., 2013). Social media is the collective of online applications that enable users to seek, generate, and/or share information(Kaplan & Haenlein, 2010). The instant and interactive nature of social media enables consumers to become active seekers of information rather than just passive recipients(Moorhead et al., 2013; Tonia, 2014). For public health professionals and practitioners, social media offer cost-effective ways to reach out to a broad audience on an ongoing basis for surveillance(Brownsten, Freifeld, & Madoff, 2009), social marketing(Thackeray, Neiger, Hanson, & McKenzie, 2008), and intervention(Horvath, Ecklund, Hunt, Nelson, & Toomey, 2015).

Especially in Korea, with one of the highest rates of social media use in the world(Kim, 2016; Lim & Kim, 2014), social media have great potential for public health benefits(Yoon & Shin, 2015). However, no research up to date has specifically investigated Korean consumers' utilization of social media in response to food risks; most research has rather addressed social media use in a general area of health and welfare(e.g., Jeong et al., 2012). One notable study(Hong & Cha, 2015) examined activities on social network sites(SNSs) concerning food risks in Korea, but the unit of analysis was an issue, not an individual.

Therefore, this study aims at offering directions for future research on consumer use of social media in response to food risks in Korea. We discuss suggestions based on a survey from one of the leading countries in this domain—U.S. We are to discuss the implications for the Korean context in three aspects, including theoretical, methodological, and practical implications. The survey was conducted, building upon from Johnson and colleagues' Comprehensive Model of Information Seeking(CMIS) (Johnson, 1997; Johnson & Meischke, 1993). The scope of information behavior was extended beyond information seeking, "the purposive acquisition of information from selected information carriers" (Johnson, 1997, p. 26), to include information sharing in order to properly address the context of social media usage(Kumar, Novak, & Tomkins, 2010). Similarly, the recently developed, social-mediated crisis

communication model(Austin, Liu, & Jin, 2012) recognizes the complicated dynamics of social media use in crisis communication by differentiating influential social media creators, followers, and inactives. A recent content analysis of consumers' Facebook posts about an over-the-counter medicine recall also encompassed both seeking and sharing(Ledford & Anderson, 2013). The present survey examined the extent to which U.S. consumers utilize social media(e.g., reading, posting, commenting, following) to seek and/or share food recall information, as well as the role of individual and health-related factors(e.g., demographics, personal experience such as disease history, and beliefs) and information carrier factors(e.g., carrier characteristics and perceived utility of communication channels; Johnson, 1997; Johnson & Meischke, 1993) in predicting social media use.

To summarize, the goals of this research were: (1) to share findings from the U.S. on customer use of social media for information seeking and sharing about food recall risks, and (2) to discuss the theoretical, methodological, and practical implications of the findings for the context of food safety and risk communication in Korea.

II. Methods

1. Data

Respondents(N = 1,026) were randomly drawn from social media users aged 18 or older, who are part of the Knowledge Network(KN)'s research panel in the U.S. The KN's panel members are representative of the U.S. population and recruited through a combination of random-digit dial and address-based probability sampling methods. They participate in online studies in return for Internet access and hardware, or for points redeemable for cash. Several screening questions(part of KN's core set of questions) were used to identify the initial population of social media users in the KN panel. Of the entire panel of 41,038 participants, 24,130 individuals(or 19,607 households) were identified and used as the initial sampling frame. About 7% of them were randomly selected for invitation

to this survey via email and telephone reminders. The cooperation rate was 60.7%. The final sample included 1,026 respondents, excluding 12 respondents who did not report using social media in the past 12 months.

Survey was administered between November 24 and December 2 in 2010 by the KN. KN provided a data file with weighting variables with respect to demographic and geographic distributions of the population ages 18 and over. Specifically, design-based weights were incorporated to account for the recruitment of the panelists and both study-specific post-stratification and panel-based weights benchmarked against the 2009 June Current Population Survey(by the Bureau of the Census for the Bureau of Labor Statistics) in the U.S. All results reported here are weighted. Institutional Review Board approval was obtained for the study protocol from the U.S. Food and Drug Administration and University of Georgia.

2. Measures

1) Social media use variables

Respondents were asked if they performed each of 17 specific activities in the past 12 months (1 = yes, 0 = no), either passive or active(Kumar et al., 2010), utilizing a variety of online applications(Kaplan & Haenlein, 2010). Using these items, we constructed two indexes: information seeking and information sharing. The indexes did not assess one underlying construct but they rather reflected a sum of related activities.

Information seeking was assessed by summing up responses to 10 items(M = .37, SD = .87, Cronbach's $\alpha = .70$): e.g., read newsletters, listservs, or email alerts about food recalls; watch videos about food recalls on a website(such as YouTube); follow friends' personal experiences or updates about food recalls on a social network site(SNS); read or post comments about food recalls on others' pages or walls on a SNS; read messages or post comments about food recalls on others' blogs or online journals.

Information sharing was assessed by adding responses to 7 items(M = .07, SD = .35, Cronbach's $\alpha = .68$): e.g., post messages about food recalls to one's own profile on a SNS; share or upload photos, videos, or audio files about food recalls online; write messages about food recalls on one's own blog or online journal; send text messages about food recalls using mobile devices; contribute to or read Wikis about food recalls.

2) Predicting variables

Based on the CMIS(Johnson, 1997) and supporting evidence in related research(e.g., Carlsson, 2000; Fox & Jones, 2009; Han et al., 2012; Rains, 2007; Tian, Thompson, & Robinson, 2006), the following variables were assessed as the predicting variables.

Demographics factors were assessed, including age, education level(1 = less than high school, 2 = high school graduate, $3 = some \ college$, $4 = bachelor's \ degree \ or \ higher$), household income(1 = less than \$20,000 to 5 = \$100,000 or more), race(0 = non-White, 1 = White), gender(0 = male, 1 = female), employment status(0 = unemployed, 1 = employed), marital status($0 = not \ married$, $1 = married \ or \ partnered$), and having children under 18 years (0 = no, 1 = yes).

Foodborne illness history was assessed by asking "Have you or your family been affected by products associated with food recalls?"(0 = no, 1 = yes).

Perceived risk of getting foodborne illnesses was assessed by asking participants to respond to two statements on a 5-point scale(1 = strongly disagree to 5 = strongly agree): "I think it is likely that I or my family will have a foodborne illness" and "I am worried about myself or my family getting a foodborne illness." Responses were averaged to create a $scale(M = 2.64, SD = .92, Cronbach's \alpha = .68).$

Perceived efficacy to manage getting foodborne illnesses was measured by asking respondents to indicate their agreement with the statement, "I am confident that I can take the right actions to avoid getting a foodborne illness"(1 = strongly disagree - 5 = strongly agree; M = 3.73, SD = .84).

Perceived trustworthiness of various information sources was assessed by asking respondents, on a 4-point scale(1= not at all to 4 = a lot), how much in general they would trust information about food recalls from four different sources: the Internet(M = 2.98, SD = .77), traditional mass media such as television, newspapers, magazines or radio(M = 3.28, SD =.72), family or friends(M = 2.98, SD = .73), and health

professionals(M = 3.49, SD = .74), respectively.

3. Statistical analysis

First, to examine the extent of consumer social media use for food recall information, we calculated the proportions of respondents who used at least one form of social media in the last 12 months, respectively for information seeking and sharing. We also examined the percentages of those who engaged in

each specific type of social media use. Second, to investigate the associations between predictors and social media use, we conducted hierarchical ordinary least squares(OLS) multiple regressions, using each of the two indexes of social media use as a dependent variable. We performed multicollinearity tests beforehand to ensure that the assumptions for the multiple regressions were not violated(Cohen, Cohen, West, & Aiken, 2003). All analyses were conducted using SPSS 21.0, with significance accepted for p < 0.05.

<Table 1> Demographic information of the sample

| | | Sample (%) | Adult U.S. population (%) |
|--------------------------------|-----------------------------|------------|---------------------------|
| Age | 18-24 | 16.4 | 12.6 |
| | 25-34 | 29.0 | 17.8 |
| | 35-44 | 22.4 | 18.1 |
| | 45-54 | 15.4 | 19.6 |
| | 55-64 | 11.9 | 15.3 |
| | 65 or older | 4.8 | 16.7 |
| Education | Less than high school | 9.0 | 9.5 |
| | High school | 22.6 | 28.8 |
| | Some college | 32.2 | 27.6 |
| | Bachelor's degree or higher | 36.2 | 34.1 |
| Household income | Less than \$20,000 | 15.0 | 18.9 |
| | \$20,000 - \$39,999 | 20.9 | 22.2 |
| | \$40,000 - \$59,999 | 18.8 | 17.0 |
| | \$60,000 - \$99,999 | 28.0 | 21.6 |
| | \$100,000 or more | 17.2 | 20.2 |
| Race/ethnicity | White, Non-Hispanic | 71.5 | 70.0 |
| | Black, Non-Hispanic | 7.8 | 10.2 |
| | Other, Non-Hispanic | 7.4 | 6.0 |
| | Hispanic | 13.3 | 13.8 |
| Gender | Male | 45.5 | 48.3 |
| | Female | 55.0 | 51.7 |
| Employment status | Working | 67.0 | 67.6 |
| | Not working | 33.0 | 32.4 |
| Marital status | Married | 52.6 | 55.5 |
| | Not married | 47.4 | 44.5 |
| Having children under 18 years | None | 56.9 | 56.0 |
| | 1 or more | 43.1 | 44.0 |

Note. Values are column percentages for each demographic factor. Adult US population data were obtained from June 2009 Current Population Survey(except for income), and 2010 Annual Social and Economic supplement(for income)

III. Results

1. Sample characteristics

The demographics of the sample are presented in <Table 1>, with U.S. adult population demographic benchmarks for comparisons. The mean age of participants was 38.8 years(SD =14.1), with ages ranging from 18 to 84. About 32% of participants had high school education or less, 32% attended some college, and 36% had a bachelor's degree or more. Participants consisted of 72% Caucasian, 55% female, and 53% married.

2. Consumer use of social media for food recall information

About 26% of respondents (N = 264) reported that they engaged in at least one form of social media use in the past 12 months, either to obtain or to share food recall information. Specifically, about 21%(N = 215) used social media only for information seeking, whereas about 1%(N = 10) reported only for sharing. About 4%(N = 39) exhibited extensive social media use involving both seeking and sharing.

With respect to the specific types of social media use, we assessed the percentages of those who reported doing so in the past 12 months. <Table 2> presents the result. Of the many forms, SNSs were the most popular channel, whereas RSS feeds and Twitter were the least popular. Overall, social media use for information seeking was more prevalent than information sharing.

< Table 2> Percentages of those using social media for food recall information in the last 12 months

| | Social media use | % of the sample |
|---------|---|-----------------|
| Seeking | Read or post comments about food recalls on others' pages or walls on a SNS | 9.0% |
| | Read newsletters, listservs, or email alerts about food recalls | 8.6% |
| | Read messages or post comments about food recalls on others' blogs or online journals | 4.1% |
| | Watch videos about food recalls on a website(such as YouTube) | 3.2% |
| | Follow friends' personal experiences or updates about food recalls on a SNS | 3.0% |
| | Browse websites about food recalls using your mobile devices(cell phones, PDA, etc.) | 2.8% |
| | Receive text messages about food recalls using your mobile devices | 2.4% |
| | Listen to podcasts or audio about food recalls on a website | 2.3% |
| | Sign up to receive email updates about food recalls from a website | 1.5% |
| | Subscribe to RSS feeds about food recalls | .3% |
| Sharing | Send text messages about food recalls using your mobile devices | 1.7% |
| | Post messages about food recalls to one's own profile on a SNS | 1.6% |
| | Share or upload photos, videos, or audio files about food recalls online | .9% |
| | Write messages about food recalls on one's own blog or online journal | .8% |
| | Contribute to or read Wikis about food recalls | .6% |
| | Start or join a food recall-related group on a SNS | .6% |
| | Use micro-blogs(e.g., Twitter) about food recalls | .5% |

Note. N = 1.024

We examined which of the demographic, health-related, and information carrier factors was associated with social media use for food recall information. Demographic and health-related

factors were entered in the first block, followed by information carrier factors in the next step. Results were obtained from OLS multiple regression analyses, respectively for each of the two outcome variables, and are presented in <Table 3>.

<Table 3> Factors associated with social media use for food recall information: OLS multiple regressions

| | Information seeking | | Information sharing | |
|------------------------------|---------------------|-------|---------------------|-------|
| | <i>B</i> | t | В | t |
| Demographic factors | | | | |
| Age | .06 | 1.82 | 00 | 11 |
| Education | 01 | 37 | .07* | 2.13 |
| Income | 03 | 86 | 07* | -2.06 |
| White | 14*** | -4.32 | 07* | -2.07 |
| Female | 00 | 03 | 06 | -1.72 |
| Employed | .02 | .59 | 01 | 24 |
| Married | .08* | 2.36 | .09* | 2.53 |
| Having children | 02 | 73 | 01 | 29 |
| Health-related factors | | | | |
| Illness history | .04 | 1.13 | .09** | 2.93 |
| Perceived risk | .14*** | 4.40 | .13*** | 3.87 |
| Perceived efficacy | .04 | 1.34 | .05 | 1.68 |
| ΔR^2 | .06*** | | .05*** | |
| nformation carrier factors | | | | |
| Trust Internet | .14*** | 3.78 | .05 | 1.33 |
| Trust traditional mass media | 06 | -1.51 | .01 | .29 |
| Trust family/friends | .04 | 1.19 | .02 | .64 |
| Trust health professionals | 08* | -2.23 | 09* | -2.42 |
| ΔR^2 | .02*** | | .01 | |
| R^2 | .08*** | | .06*** | |
| $F (df_1, df_2)$ | 5.48 (15, 982) | | 3.85 (15, 982) | |

Note. Cell entries are final standardized betas and t values, as well as incremental adjusted R^2 in each block of the model and total adjusted R^2 and F values in the whole model. White (0 = non-White), Female (0 = male), employed (0 = unemployed), married (0 = not married), having children under 18 years (0 = no), foodborne illness history (0 = no). **p < .05, ***p < .01, ****p < .001.

Of the demographic factors, race/ethnicity and marital status were significant predictors of social media use for food recall information seeking. Whites were less likely to use social media to seek information than non-Whites($\beta = -.14$, p < .001). Married persons reported seeking information more than

non-married(β = .08, p = .018). Of health-related factors, perceived risk was the only significant and positive predictor(β = .14, p < .001). Among information carrier factors, trust in Internet was positively associated with social media use for information seeking(β = .14, p < .001), whereas trust in health

professionals was negatively associated ($\beta = -.08$, p = .031).

As for social media use for information sharing, four demographic factors were significant predictors. Respondents with higher education ($\beta = .07$, p = .034) and those being married($\beta = .09$, p = .011) were more likely to share information than their counterparts. Those with higher income $(\beta = -.07, p = .040)$ and Whites $(\beta = -.07, p = .039)$ were less likely to do so. Of health-related factors, foodborne illness history($\beta = .09$, p = .004) and perceived risk of getting foodborne diseases(β = .13, p < .001) were positive predictors. Of information carrier factors, trust in health professionals was the only significant, negative predictor($\beta = -.09$, p = .016).

IV. Discussion

1. Summary of the U.S. findings

Approximately one in four respondents reported using at least one form of social media for food recall information in the last 12 months, suggesting a great potential of social media for consumer response to food risks(Freberg, 2012; Gaspar et al., 2014; Rutsaert et al., 2013). Popularity varied across specific social media tools: SNSs were the most popular, followed by newsletters, listerys, or email alerts, whereas RSS feeds and micro-blogs were used least often. In terms of seeking versus sharing, respondents were more likely to seek information by reading others' SNS posts, newsletters, listservs, or emails, rather than post actively or share information, similar to past findings on online use in general in the U.S.(Li, 2010; Nielsen, 2006). In addition, there were several key factors being associated with social media use for food recall information, including being married, perceived risk, and lack of trust in health professionals, etc.

2. Implications for the Korean context and suggestions

1) Theoretical implications

Our findings suggest that the CMIS is a useful framework in the context of social media use for food recall information,

possibly in Korea as well. However, in applying the model to a new context, further thoughts on several components of the model are needed(Johnson, 2003). First, it is important to understand that the concept of information seeking may be expanded to encompass information sharing. Information seeking has been studied extensively based on several theoretical models(Galarce, Ramanadhan, & Vishwanath, 2011), such as the CMIS(Johnson, 1997) and the Risk Information Seeking and Processing Model(Griffin, Dunwoody, & Neuwrith, 1999), and its theoretical discussion(Galarce et al., 2011) often involves a distinction between seeking and incidental exposure or scanning, which is a more passive form of information acquisition(Shim, Kelly, & Hornik, 2006). With a growing use of social media, especially in a case of Korea(Kim, 2016; Lim & Kim, 2014), the spectrum of discussion may be extended to a more active level of sharing(Kumar, Novak, & Tomkins, 2010). But we should also note that, despite the greater participative nature of social media, the proportion of those who shared food recall information was not high in the U.S. data. Therefore, further conceptual explications and theoretical elaborations of information engagement are needed to thoroughly examine the degree and nature of social communication for food safety and risk in Korea. For example, in line with the idea on collaborative information seeking(Hertzum, 2008; Reddy & Spence, 2008) - which is defined as "an information access activity related to a specific problem solving activity" which "involves human beings interacting with other human(s) directly and/or through texts"(Reddy & Spence, 2008, p. 243) - we may advance research on information seeking on social media as a shared activity among those in social networks, not simply as an individual and independent activity.

Second, information carrier factors need to tap into "the socioinformational context in which" individuals have choices of multiple media sources to seek information(Rains, 2007, p. 676). When lay public use media for food risk information in Korea(Shim & You, 2014), social media are one of various information sources available. It is necessary to understand what lead individuals to use this particular source for food recall

information, instead of alternative sources(Hou & Shim, 2011; Kivits, 2004). Also as shown by the U.S. data in this study, popularity varied across specific social media tools, including SNSs, newsletters, listervs, email alerts, RSS feeds and micro-blogs. Future research in Korea needs to note the variances across media choices among consumers in response to food risks, and specify concepts and variables to properly assess the rapidly changing, socioinformational context of Korea.

Third, it is important to investigate predictors of social media use within the CMIS framework that are relevant to Korea. For example, according to the U.S. study, marital status and race were the significant predictors of social media use for both seeking and sharing; in Korea, the greater likelihood of social media use for food information among married people still makes sense whereas the difference across racial/ethnic groups awaits further refinement. It is also interesting that education and income were significant predictors of information sharing, but not seeking in the U.S., which needs reexamination in the Korean context. Furthermore, some counterintuitive finding in the U.S. study, such that low-income people usually regarded as being underserved for Internet access were more likely to use social media for food recall information, also warrant future study in Korea. It is plausible that some deficits in resources in a face-to-face context were not barriers to active use of social media for food recalls, but they were rather motivators to use a more engaging communication tool(Han et al., 2012). Risk perception(Rimal & Real, 2003) and perceived trustworthiness of the Internet and that of health professionals(Hou & Shim, 2011; Kivits, 2004) also deserve attention as primary predictors of social media use for food risk information in Korea.

2) Methodological implications

The present study have methodological implications for future research in Korea in this domain. Several strengths of the U.S. survey may provide future research directions. First, the relatively large sample size and the rigorous sampling procedure give support for the generalizability of the findings. Most past studies on Korean consumers' risk perception and

attitude about food risks, reviewed before in this article(e.g., Lee, 2008; Yoon & Kim, 2015; You, 2013), had a relatively small sample size, less than five hundred; more efforts need to be paid to the sampling procedure and sample size in research. Second, the KN's nationwide research panel and its monitoring system suggests some better ways to manage similar panels currently existing in Korea. Additionally, the form of online survey seems to be suitable for research with nationwide social media users in response to public health risks. This way, research can be conducted in cost-effective and timely manners.

The limitations of the study also suggest future research directions in Korea. First, future research must consider how to develop distinctive measures for seeking and sharing. respectively. Social media have blurred the boundary between information seeking and sharing. When someone posts comments about food recalls on SNSs, it may be unclear whether the person is either seeking information or sharing information with others, or doing both simultaneously. Our study also does not speak to the extent of information sharing through other channels, such as sharing with family or friends in a personal setting after using social media. It is likely that information sharing occurs in other forms, which are not captured in this study, awaiting future research. More refined and valid operationalization is thus needed. Second, future research needs to construct more valid and reliable measures to assess predictors, such as perceived risk and efficacy among Korean lay public. Many measures used in this study consisted of a single item because the questionnaire was constrained by the need to limit potential questions to those that had been preapproved by the U.S. Office of Management and Budget under Paperwork Reduction Act requirements. Use of single-item measures may have caused problems of increased error variance and attenuated effects. Also, the single-item measure of perceived efficacy might not have been successful in tapping into the relevant construct in the specific context of our research. Self-efficacy is dependent upon specific contexts and domains, and thus efficacy to ask a doctor for treatment options may be different from efficacy to find that information online(Galarce et al., 2011). In addition, the U.S. data were

collected a few years ago, with possible concerns about the outdatedness of the data, and therefore suggesting even greater needs for research on the current situation in Korea. Lastly, note that the observed associations with the cross-sectional data do not justify causal claims between the predictors and social media use for food recall information. To address this limitation, the directions of the associations between the variables in this study are interpreted based upon a theoretical model and past research.

Practical implications

Our findings also have important practical implications for the context of food safety in Korea. Food safety is an compelling issue with universal interest(Anderson, 2000), and this also holds true in Korea with several recent cases, including the carcinogenic substance benzopyrene in the instant noodles(Ju, Lim, Shim, & You, 2015) and Chinese processed food related to the melamine scandals(Shim & You, 2015). Social media have a great potential for reaching a diverse group of people for emergent food risk information. While government agencies, such as Korean Centers for Disease Control and Prevention(CDC) and Ministry of Food and Drug Safety(MFDS), and organizations are investing increasing resources into social media campaigns(Yoon & Shin, 2015), our findings show that not all people use social media for food recall information. Therefore, before developing social media campaigns, it is important to understand the user characteristics of those reachable via this new medium in Korea. Large research project(either funded by government agencies or research organizations) regarding social media users in Korea is needed, specifically in the domain of food risk and safe, as there were such approach in either a very general area(Do, Shim, & Lee, 2010) or an area of health and welfare(e.g., Jeong et al., 2012). Having accurate information of target audience, campaign practitioners will be able to succeed in achieving a high enough level of exposure to the campaign, which is the first step of all public health campaigns and education(Hornik, 2002).

It is also important to consider which particular social

media tools can be the most effective in reaching the audience since various social media channels have different levels of popularity among social media users in Korea. For example, with a given number of resources available, public health professionals may want to use SNSs rather than micro-blogs. Of the many SNSs, Koreans were found to use KakaoStory and Facebook the most extensively, followed by Twitter, Naver Band, Cyworld, KakaoGroup, and Instagram in year 2015 Kim, 2016); data on whether this popularity holds true for the specific purpose of food risk information will be useful in media relations over the course of public intervention and education.

V. Conclusions

In Korea, theoretical elaboration and empirical data are needed to investigate social media use to seek and/or share information in response to food recall risks. Such efforts will allow us to construct evidence-based public health education that guides more active engagement with food risk information. Also, investigating socio-demographic, health-related, and informational determinants of social media use in Korea will help specify ways to maximize the effectiveness of public health and education programs in food safety and risk communication.

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