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Comparing Local TV News with National TV News in Cancer Coverage: An Exploratory Content Analysis

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Abstract

We compared local TV news with national TV news in terms of cancer coverage using a nationally representative sample of local nightly TV and national network TV (i.e., ABC, CBS, NBC, and CNN) cancer news stories that aired during 2002 and 2003. Compared to national TV news, local TV cancer stories were (a) much shorter in length, (b) less likely to report on cancer prevention (i.e., preventive behaviors and screening tests), and (c) less likely to reference national organizations (i.e., NCI, ACS, NIH, CDC, FDA) that have made clear recommendations about ways to prevent cancer. The implications of these findings for health communication research and cancer education were discussed.

Keywords

Cancer Coverage; Local TV News; National TV News; Content Analysis

Knowledge and information play a critical role in cancer control (Slater, Long, Bettinghaus, & Reineke, 2008; Viswanath, 2005). Recent studies have reported that individuals with high levels of health or medical knowledge are more likely to engage in pro-health behaviors and to take disease screening tests, and are less likely to engage in health-threatening behaviors (e.g., Hornik et al., in press; Lee, 2009). Thus, health educators and public health practitioners have tried to convey crucial health information to the general public using a variety of media channels. Past research has consistently found that Americans acquire health or medical information primarily from local TV news rather than other news sources

(e.g., national network newscasts, newspapers, radio, the Internet, etc.; Pew Research Center, 2009a; Pribble et al., 2006). Also, local TV news is viewed more favorably by its audience than are other media outlets, such as daily newspapers and network TV news (Brodie, Hamel, Altman, Blendon, & Benson, 2003; Kaniss, 1991; Pew Research Center, 2009a, 2009b). Therefore, it is plausible that local TV health news is quite influential in shaping, reinforcing, and changing U.S. citizens' health-related knowledge and beliefs and, consequently, affecting health outcomes.

Despite the importance of local TV news, some recent studies have reported worrisome, harmful effects of local TV news coverage on cancer-related beliefs. For example, Niederdeppe, Fowler, Goldstein, & Pribble (2010) used a nationally representative survey of U.S. adults and found a positive relationship between local TV news viewing and fatalistic beliefs about cancer prevention (see also Lee & Niederdeppe, 2011). This relationship was not found for newspaper readership or national TV news viewing. Based on these findings, the authors suggested that local TV cancer news may cultivate cancer fatalism. Likewise, Jensen et al. (2011) reported that streamlined cancer news (i.e., news omitting limitations of medical research), which has been found to be typical of local TV health news (e.g., Pribble et al., 2006), leads to nutritional backlash (i.e., a variety of negative feelings about dietary recommendations) and cancer fatalism, while decreasing trust in medical professions.

To our knowledge, only three groups of researchers have studied local TV news coverage of health or cancer. These studies have revealed a few limitations of local TV news coverage of health issues in general and of cancer in particular. First, the Kaiser Family Foundation and the Center for Media and Public Health (1998) examined 17,074 local weekday evening news stories from 13 cities in 1996, and they found that health was the fifth most frequently covered topic in local news, accounting for 7% of the examined local TV news stories. Also, the Kaiser study found that cancer ranked second among local TV news disease stories, next to food-borne illnesses. However, this study reported that health stories tend to be briefer than any other topics. On average, health news lasted approximately 2 minutes, which is shorter than commercials, crime, sports, and weather.

Second, Pribble and colleagues in the News Lab at the University of Wisconsin-Madison (2006) conducted a content analysis of full-length health stories on local TV news from the top 50 U.S. media markets in October 2002. They found that, although health stories comprised roughly 11% of non-sports and non-weather-related local TV news airtime, their median length was 33 seconds. Only 6% of all health stories were found to cite specific data sources and few disease-related stories provided recommendations about known prevention strategies. In addition, among the health stories about medical conditions, cancer received the second heaviest coverage among diseases following infectious disease. However, local TV news cancer coverage did not accurately reflect population-level incidence rates for each type of cancer, by underreporting lung cancer and skin cancer, and overemphasizing breast cancer.

Third, Wang and Gantz (2007) reported, based on their examination of 1,863 news stories in 7 major U.S. media markets in 2000, that health stories constituted about 10% of local TV news stories and that cancer was covered more frequently in local TV health news stories

than any other health topic. However, on average, health stories lasted less than 1 minute and local TV health news stories, including cancer coverage, provided very little follow-up information. Wang and Gantz (2010) updated and expanded this study by conducting a content analysis of 1,382.5 hours of local TV newscasts from four markets of different sizes (a major, a large, a medium, and a small market) in the midwestern United States between 2004 and 2005, and replicated their previous findings. In addition, Gantz and Wang (2009) conducted a subsequent analysis on a subset of these stories and found a similar pattern for cancer.

Although these studies have improved our understanding of problematic characteristics of local TV news, further research is necessary for several reasons. First of all, previous content analytic works dealt with large media markets or were geographically restricted, rather than employing a nationally representative sample of local TV newscasts. More importantly, only one study (i.e., Niederdeppe et al., 2010), to our knowledge, directly compared local TV cancer news coverage with other sources, such as newspapers. Niederdeppe and colleagues (2010) found that local TV news is more likely than newspaper news to cover new cancer research and cancer causes, but less likely than newspaper news to include follow-up information about cancer research. However, no studies have compared the characteristics of cancer coverage on local TV news with that on national TV news, a comparison made relevant by prior findings showing that cancer fatalism is associated with local but not national TV viewing (e.g., Lee & Niederdeppe, 2011; Niederdeppe et al., 2010). To directly address these issues, this study compares local TV news cancer coverage with national TV news cancer coverage using a nationally representative sample of local TV news.

Comparing Local TV News with National TV News

Despite the lack of research comparing local and national TV cancer news, prior research in the fields of sociology of journalism and political reporting during the past decades provides us with some theoretical frameworks, which led to the hypotheses in the current research (see Viswanath et al., 2008). It has long been noted that local TV news reporters and editors are less likely than their national TV counterparts to have enough resources (e.g., time, budget, number of staff) to cover a story (Bradshaw, Foust, & Bernt, 2005; Gans, 2004; Kaniss, 1991; Weaver, Beam, Brownlee, Voakes, & Wilhoit, 2006). For instance, local TV stations have fewer staff than national TV stations. Also, local TV news stations are more likely to have general assignment reporters than health and medical reporters with specialized knowledge in those areas, although in recent years local TV stations have started to hire reporters specialized in health (Kaniss, 1991; Tanner, 2004; Wallington, Blake, Taylor-Clark, & Viswanath, 2010). To make matters worse, local journalists regularly spend much time promoting community-wide common causes or events, which may exacerbate their time constraints (Bradshaw et al., 2005; Schudson, 1988). Thus, local TV news reporters and editors run the risk of compromising news quality when they put little time and few resources into producing news stories. Such a lack of time, budget, and other resources becomes a particularly serious problem in the case of health and medical coverage, considering its complex, specialized, and technical nature. Because of these limitations, it is likely that local TV cancer news will be less thorough than national TV cancer news.

Considering that the length of a story is often used as an indicator of the thoroughness of a news story (e.g., Bodle, 1996), we propose the following hypothesis:

H1: Local TV cancer news stories will be shorter than national TV cancer news stories.

A news story can be framed in different ways: episodic and thematic frames (Iyengar, 1991). An episodic frame approaches a public issue from an individual perspective by focusing on its single, discrete cases or events. On the contrary, a thematic frame approaches an issue from a broader/contextual perspective, by focusing on its contexts, environments, and trends. Thus, an episodic frame of cancer news pays attention to a variety of events or cases featuring individual patients, such as cancer patients' treatment experiences and suffering or death of cancer patients. In contrast, thematically framed cancer news stories focus on the overall trend in cancer diagnosis, treatment, survival rates, and the socio-cultural contexts of cancer.

We expect that local TV cancer news stories are more likely than national TV news stories to adopt an episodic frame. This is primarily because of the limited resources available to local TV journalists (Gans, 2004; Tanner, 2004; Wallington et al., 2010). In particular, local news organizations tend to have reporters who are not as well trained as those in national news organizations (Tanner, 2004; Weaver et al., 2006). Episodic news frames involve primarily plain, descriptive reports of individual events, whereas "thematic coverage... would require in-depth, interpretive analysis, which would take longer to prepare" (Iyengar, 1991, p. 14). Thus, covering cancer from a thematic perspective requires more resources than does an episodic frame. Since reporters with limited resources and a lower knowledge base have more difficulties conducting in-depth, investigative reporting of cancer-related topics, local TV news coverage may adopt an episodic frame more frequently than national TV news.

Moreover, compared with national TV news organizations, local TV news organizations are under heavier commercial pressure (Gans, 2004; Hamilton, 2005; Schwitzer, 2004). National news organizations tend to have larger markets, whose audience base is more broad and diversified (Gans, 2004; Kaniss, 1991). In contrast, local news organizations normally have only a restricted pool of local advertisers. Moreover, news programs were found to account for more than 40% of local TV stations' revenues (Project for Excellence in Journalism, 2006). To attract a larger audience, TV news coverage often adopts an episodic frame because an episodic frame features appealing visuals and often consists of on-the-scene and live newscasts, which are more likely to attract audiences and keep their attention. A thematic frame, on the other hand, is often "dull and slow-paced" and thus less likely to stimulate viewers' interests (Iyengar, 1991, p. 138).

Results of the recent surveys with local journalists are in support of this reasoning. For example, Viswanath et al. (2008) surveyed 468 journalists in 463 local and national broadcast and print media outlets in 2005, and compared the newsworthiness criteria for pursuing a news story between national and local reporters and editors. They found that 80.5% of local TV reporters and editors focused on whether a story may generate a "human-interest angle," whereas 49.5% of national TV reporters and editors paid attention to such newsworthiness. Similarly, Tanner (2004) showed that local TV health reporters considered

the audience's interest in a story and the ability to humanize a story more than any other factors in deciding which health topics they cover. Based on these considerations, we posit the following hypothesis:

H2: Local TV news cancer stories will include more persons with cancer than will national TV news cancer stories.

Commercial considerations play a critical role not only in determining the format (i.e., news frame) but also the content of news (Hamilton, 2005; Kaniss, 1991; Switzer, 2004). To attract a larger audience, local news media are more likely to not only adopt an episodic frame, but also to focus primarily on stories that may provoke intense emotions rather than simply inform the audience (Kaniss 1991; Viswanath et al., 2008). News stories about cancer prevention, which consists of "primary" prevention (i.e., preventive behaviors) and "secondary" prevention (i.e., screening tests; see Spratt, 1981), often lack drama, are rarely novel or controversial, and thus are less interesting to viewers (Stocking, 1999). For example, cancer screening tests and cancer prevention behaviors, such as smoking cessation, fruit and vegetable consumption, and regular exercise, have long been recommended by national organizations, such as the American Cancer Society (ACS), the National Cancer Institute (NCI), and the Task Force on Preventive Services. However, to maximally utilize their limited news time, local TV news reporters and editors may focus less on these well-established preventive behaviors or screening tests than do national TV news reporters and editors.

Moreover, a few recent studies have reported that local TV news cultivates fatalistic beliefs about cancer prevention whereas national TV news does not (e.g., Lee & Niederdeppe, 2011; Niederdeppe et al., 2010). These findings may suggest that local TV news is less likely than national TV news to convey cancer prevention-related information. Thus, the following hypothesis is generated:

H3: Local TV news coverage will be less likely to include information about cancer prevention (i.e., preventive behaviors and screening tests) than will national TV news coverage.

Additionally, the quality of a news story lies in the credibility of its sources. News coverage is the result of reporters' or editors' active engagement with sources as well as their independent research and own ideas (Brechman, Lee, & Cappella, 2011; Dunwoody, 1999; Gans, 2004). Although journalists try to choose authoritative sources that are perceived as being credible and having more accurate information, previous studies illustrate that most sources used in news stories tend to be limited to people with whom journalists have frequent and regular contact and who are geographically close to the news organization (Gans, 2004; Kaniss, 1991; Tuchman, 1978). Since larger, national news organizations tend to have correspondents throughout the world and have more connections with a variety of sources who are frequently used in health and science reporting (Kaniss, 1991; Wallington et al., 2010), national TV news agencies may have greater access to authoritative sources and thus are likely to mention more authoritative health organizations in their news than are local TV news agencies. Hence, the following hypothesis is generated:

H4: National TV cancer news stories will be more likely to mention authoritative health organizations than will local TV cancer news stories.

Method

Media Outlet Sampling Strategy

We tested our hypotheses using a nationally representative sample of local nightly TV newscasts collected in 2002 and 2003 by one of the authors. A representative sample of major network evening newscasts (ABC, CBS, and NBC) and CNN was also included.

The sample was created by stratifying U.S. local television stations based on their designated market area (DMA[®]). DMAs are used by the advertising industry to define U.S. electronic media markets. The country's 210 DMAs were divided into six strata in which any given individual would have as nearly as possible equal opportunity to appear, with each stratum consisting of approximately one-sixth of all U.S. households (see Long et al., 2005, for details on the content analysis sampling strategy).

Consistent with recommendations for sampling news content (Riffe, Lacy, & Fico, 2005), two 28-day constructed months, one for each year, were created. For each constructed month, one constructed week per season of the year was selected. The constructed months ensured equal numbers of each day of the week during each of the four seasons of the year to fairly represent news coverage during each of the two study years.

One DMA was selected randomly from each of the six strata for a total of six DMAs per day of the sample (Long et al., 2005). Then, the following procedures were used to sample local TV news programs and national TV news programs.

TV News Program Selection

After a DMA was chosen, one local, network-affiliated nightly newscast was selected randomly from that DMA (Long et al., 2005). Network affiliation was balanced across all six strata on each sampling date such that two stations were chosen from each of the networks affiliates. Other local newscasts, such as independent stations and the Fox network, were not included in the sample because at the time that the sample was selected, they did not consistently provide nightly newscasts.

The national evening newscasts from the three major networks and CNN were sampled by obtaining newscasts from Vanderbilt University's Television News Archive for each sample date.

In total, approximately 560 TV newscasts were sampled. On any given sampling date, six were local TV news programs and four were national network TV news programs.

News Story Selection

Coders were trained to determine whether news stories mentioned cancer in the beginning of stories. Coders watched any story teasers and the first 15 seconds of the story; if the story was introduced by an anchor and then continued by a reporter, coders watched the first 15

seconds of the anchor's introduction and the first 15 seconds of the reporter's coverage. To identify cancer stories, coders examined TV broadcasts from beginning to end. To test the reliability for identifying cancer stories, coders watched a randomly selected group of TV newscasts that represented all six DMA strata and the national TV newscasts. Four coders participated in establishing the initial reliability for cancer story identification. Cohen's kappas for TV story selection ranged from .77 to .90 (a range is provided because multiple pairs of coders tested the coding scheme reliability); only one reliability coefficient was below .80.¹ Because of the lengthy time involved in selecting cancer stories over the 2-year period of this study, we used Cohen's kappa to test for intercoder drift at three additional points: after 25%, 50%, and 75% of the sample had been coded. Two coders participated in coder drift tests, and subsequently continued to select cancer stories. The kappas for identifying cancer stories at these checkpoints were as follows: .89 at the 25% mark, .98 at the 50% mark, and .88 at the 75% mark. In total, 27 national and 56 local TV cancer news stories among 560 TV newscasts were identified for further study. This small number itself is particularly noteworthy, considering the importance of TV as the American public's most preferred health information source and the extremely high cost of cancer control (Brodie et al., 2003; Viswanath, 2005).

Story-level Coding

Each story was coded for (1) length (in seconds), and whether the story (2) mentioned any person with cancer (i.e., cancer patients, cancer survivors, a person who died from cancer), (3) discussed cancer screening tests, (4) discussed cancer preventive behaviors, and (5) cited each of the following authoritative health organizations: NCI, ACS, FDA, CDC, and NIH. To test the reliability for story-level variables, two trained coders coded a random selection of stories that represented approximately 50% of the sample. Cohen's kappas for the story-level coding items are as follows: story mentions at least one person with cancer = .90, story mentions cancer screening tests = .54, story mentions cancer preventive behaviors = .90, story mentions NCI = .85, story mentions ACS = 1.0, story mentions NIH = 1.0, story mentions CDC = 1.0, story mentions FDA = 1.0.² We combined "preventive behaviors" and "screening tests" into one category (i.e., story discussed preventive behaviors *or* screening tests, yes or no) because of the following considerations. First, while some studies have treated these two separately, others have classified these into one broader category, i.e., cancer prevention (see Spratt, 1981). As outlined earlier, preventive behaviors can be regarded as "primary" prevention and screening tests can be regarded as "secondary" prevention. Second, we made this analytic decision because of the small number of stories in each category. Likewise, we integrated all five health organizations into one code (i.e., story cited *any* of the five health organizations, yes or no).

¹All kappas for the pairs of coders are available upon request from the first author.

²Although we combine some of these items into a bigger category to test our hypotheses, we report reliability of each item separately. This is because "practice of averaging reliability coefficients across variables is inappropriate. It obviously results in the obscuring of low reliabilities that do not pass muster...Reliability coefficients must be reported separately for each and every measured variable" (Neuendorf, 2002, pp. 142-143; see also Krippendorff, 2004, p. 429).

Results

As predicted, the mean length of local TV cancer news was 45.25 (in seconds, $SD = 40.69$), whereas the mean length of national TV cancer news was 80.24 (in seconds, $SD = 61.77$). This difference was statistically significant ($t(83) = 3.13$, $p = .002$, Cohen's $d = .67$), which supports H1.

H2 was not supported. There was no statistically significant association between type of TV news (local vs. national) and the extent of mentioning specific persons with cancer ($\chi^2(1) = 2.05$, $p = .15$; Phi = .16; See Table 1).³

As expected, local TV news was less likely to convey information about cancer prevention (i.e., preventive behaviors and screening tests) than national TV news ($\chi^2(1) = 4.06$, $p = .04$; Phi = .22), supporting H3. To be more specific, national TV cancer news stories had 3 times greater odds of providing information about cancer prevention than local TV cancer news stories (odds ratio = 3; see Table 2).

H4 was supported as well. There was a significant association between the type of TV cancer news (national vs. local) and whether or not cancer news mentioned authoritative, major health organizations (i.e., NCI, ACS, FDA, CDC, NIH; Fisher's Exact Test $p = .01$). Based on the odds ratio, national TV cancer news stories were 6.18 times more likely to mention these organizations than were local TV cancer news stories (see Table 3).

Discussion

To our knowledge, this study represents the first systematic effort to compare local TV news with national TV news in terms of cancer coverage using a nationally representative sample of local nightly TV news. A few interesting findings of the present study and their implications should be highlighted. First, local TV cancer news stories are shorter than national TV cancer news stories, which suggests that local TV may cover cancer in a more superficial manner. Since health or cancer-related issues are inherently complex and technical, brief coverage of cancer on local TV news may not be useful to viewers (Pribble et al., 2006; Wang & Gantz, 2010). Local TV cancer news, on average, lasted less than one minute (i.e., 45.25 seconds vs. national TV's 1 min 20.24 seconds); thus, local TV news viewers may be less likely than national TV news viewers to gain health or cancer knowledge from their exposure to local TV news coverage. Considering that health knowledge and health literacy are negatively associated with problematic perceptions about cancer (e.g., fatalism, overload; Jensen et al., 2011; Lee, Niederdeppe, & Freres, 2012) and are likely to promote health-enhancing behaviors (e.g., healthy lifestyle and disease-screening behaviors; Hornik et al., in press; Lee, 2009), health educators and public health practitioners may not be able to rely upon local TV cancer news as their major information channel to convey cancer-related information to the public. Short cancer stories are also problematic because they are less likely than longer stories to include follow-up information,

³Since our sample size is small, one may argue that the Chi-square test may be underpowered. However, we decided to report the χ^2 statistic because no expected counts dip below 5 in Table 1. Also, the one-way Fisher's exact test confirms that there is no statistically significant association between the type of cancer news and the mention of a specific person with cancer ($p = .12$).

which allows viewers to evaluate the credibility of cancer stories by identifying source materials behind those stories and seeking relevant further information. TV news stories tend to be “short and fleeting” and therefore they need follow-up information more than those in print media and on the Internet (Gantz & Wang, 2009, p. 71).

Moreover, local TV news coverage of cancer did not include a person with cancer more frequently than did national TV news coverage. In hindsight, there seems to be a good reason for why H2 was not supported. The inclusion of a person with cancer in a TV news story is an imperfect indicator of the use of episodic framing. Thematic stories are also likely to mention people who have cancer as a way to draw readers into these stories, which Iyengar (1991, p. 138) states are often “dull and slow-paced.” Thus, to more accurately examine whether a cancer news story adopts an episodic frame, future studies should go beyond coding the presence of a person with cancer and examine whether a cancer news story only focuses on individual cases or events without placing these within the general contexts (Iyengar, 1991).

In addition, local TV news stories conveyed information regarding cancer prevention (i.e., preventive behaviors and screening tests) less frequently than national TV news stories. Cancer prevention-related information plays a major role in lowering viewers’ likelihood of getting cancer (Viswanath, 2005). Recent studies have demonstrated that active searching for and routine exposure to cancer prevention-related information tend to increase cancer-related knowledge, and lead people to engage in healthy lifestyle behaviors and take cancer screening tests (e.g., Hornik et al., in press; Lee, 2009). Therefore, it appears that national TV news may contribute to cancer control more than local TV news does.

Finally, this study showed that local TV cancer news coverage is less likely than national TV news coverage to cite major, authoritative health organizations. This result is consistent with the conclusion of the Project for Excellence in Journalism (2006), which compared local TV newscasts with national TV newscasts, newspapers, and other sources and concluded that, in general, “local TV news stories emerged as the most thinly sourced and shallowly reported of any medium studied other than local radio” (p. 1). One might, however, argue that this finding may have resulted from the differences in the length between local TV cancer news and national TV cancer news (H1). That is, it is possible that fewer organizations can be referenced in local TV news than national TV news because local TV news tends to be shorter than national TV news. To rule out this alternative explanation, future studies should employ a multivariate cross-tabulation, which could not be conducted in this study because of its small sample size.

However, a few limitations of this study should be mentioned. First, the reliability for the screening tests code (.54) was less than desirable, while still acceptable (moderate; Krippendorff, 2004).⁴ Because of this rather low reliability, our conclusion regarding prevention (i.e., preventive behaviors and screening tests) should be regarded as tentative. Second, while this study revealed some differences between how local TV news and national TV news cover cancer, future studies should investigate differences between national and local TV news coverage of cancer in greater detail. For instance, we suggest that the following questions should be addressed: Are local TV news stories more likely

than national TV news to convey cancer-related research findings without appropriate caveats and hedges (e.g., Jensen et al., 2011)? Does local TV news coverage report new, controversial causes of cancer more often than national TV news coverage (e.g., Nelkin, 1995; Stocking, 1999)? Does national TV news coverage provide more treatment-related information than local TV news coverage? We believe that this study provides a starting point for more careful examinations of the varied, subtle differences between local TV and national TV in health and science journalism. Third, although this study uses a nationally representative sample of local TV news, the sample was limited to nightly newscasts. It is possible that stories broadcast at other times of the day (e.g., morning, midday) may demonstrate different characteristics. Finally, this study examined only 83 cancer stories. This small sample size makes it necessary for future research to expand the sampling scope for local and national TV cancer news.

Despite these limitations, this study moves the literature substantially forward by systematically comparing local TV cancer news with national TV cancer news for the first time. More important, considering the high costs of collecting a national sample of local TV news coverage (Long et al., 2005; Slater et al., 2008), our nationally representative sample of local TV newscasts has a unique value, since to our knowledge, it is the only one of its kind. However, given the aforementioned limitations, this study provides only an exploratory comparison between national and local TV news in terms of cancer coverage. We hope that this study spurs additional research to develop a better understanding of differences in content and format of local TV health news and national TV health news.

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References

- Banerjee M, Capozzoli M, McSweeney L, Sinha D. Beyond kappa: A review of interrater agreement measures. *Canadian Journal of Statistics*. 1999; 27:3–23.
- Bodle JV. Assessing news quality: A comparison between community and student daily newspapers. *Journalism & Mass Communication Quarterly*. 1996; 73:672–686.
- Bradshaw KA, Foust JC, Bernt JP. Local television news anchors' public appearances. *Journal of Broadcasting & Electronic Media*. 2005; 49:166–181.
- Brechman JM, Lee C-J, Cappella JN. Distorting genetic research about cancer: From bench science to press release to published news. *Journal of Communication*. 2011; 61:496–513.

⁴There are no agreed-upon acceptable levels of a variety of inter-coder reliability coefficients (Krippendorff, 2004; Neuendorff, 2002). Compared with percent agreement, however, such beyond-chance statistics as Cohen's kappa and Scott's pi are allowed a more liberal criterion by researchers. This is because "Both pi and kappa have been criticized as being overly conservative, giving credit only to agreement beyond chance, a tough challenge in the case of extreme distributions" (Neuendorf, 2002, p. 151). A few scholars have proposed some criteria for Cohen's kappa. For instance, Benerjee, Capozzoli, McSweeney, & Sinha (1999) contended that .75-1 indicates excellent agreement beyond chance; a kappa coefficient of .40-.75 fair to good agreement beyond chance; and a variable below .40 should be dropped from data analysis. Likewise, Landis and Koch (1977) proposed that .81 to 1.00 indicates substantial agreement; .61 to .80 moderate agreement; .41 to .60 fair agreement; and below .40 poor agreement.

- Brodie M, Hamel EC, Altman DE, Blendon RJ, Benson JM. Health news and the American public, 1996–2002. *Journal of Health Politics, Policy, & Law*. 2003; 28:927–951.
- Dunwoody, S. Scientists, journalists, and the meaning of uncertainty. In: Friedman, SM.; Dunwoody, S.; Rogers, CL., editors. *Communicating uncertainty: Media coverage of news and controversial science*. Mahwah, NJ: Lawrence Erlbaum; 1999. p. 59-80.
- Gans, HJ. *Deciding what's news: A study of CBS evening news, NBC nightly news, Newsweek, and Time*. Evanston, IL: Northwestern University Press; 2004.
- Gantz W, Wang Z. Coverage of cancer in local television news. *Journal of Cancer Education*. 2009; 24:65–72. [PubMed: 19259868]
- Hamilton, JT. The market and the media. In: Overholser, G.; Jamieson, KH., editors. *The press*. Oxford, UK: Oxford University Press; 2005. p. 351-371.
- Hornik RC, Parvanta S, Mello S, Freres D, Kelly B, Schwartz JS. Effects of scanning – routine health information exposure – on cancer prevention and screening behaviors in the general population. *Journal of Health Communication*. (in press).
- Iyengar, S. *Is anyone responsible?*. Chicago: University of Chicago Press; 1991.
- Jensen JD, Carcioppolo N, King AJ, Bernat JK, Davis LA, Yale R, Smith J. Including limitations in news coverage of cancer research: Effects of news hedging on fatalism, medical skepticism, patient trust, and backlash. *Journal of Health Communication*. 2011; 16:486–503. [PubMed: 21347947]
- Kaiser Family Foundation & Center for Media and Public Affairs. *Assessing local television news coverage of health issues*. 1998 Available at <http://www.kff.org/mediapartnerships/1374-crime.cfm>.
- Kaniss, P. *Making local news*. Chicago: University of Chicago Press; 1991.
- Krippendorff K. Reliability in content analysis: Some common misconceptions and recommendations. *Human Communication Research*. 2004; 30:411–433.
- Landis JR, Koch GG. The measurement of observer agreement for categorical data. *Biometrics*. 1977; 33:159–174. [PubMed: 843571]
- Lee C-J. The interplay between media use and interpersonal communication in the context of healthy lifestyle behaviors: Reinforcing or substituting? *Mass Communication and Society*. 2009; 13:48–66.
- Lee C-J, Niederdeppe J. Genre-specific cultivation effects: Lagged associations between overall TV watching, local TV news viewing, and fatalistic beliefs about cancer prevention. *Communication Research*. 2011; 38:731–753.
- Lee C-J, Niederdeppe J, Freres D. Socioeconomic disparities in fatalistic beliefs about cancer prevention and the Internet. *Journal of Communication*. 2012; 62:972–990.
- Long M, Slater MD, Boiarsky G, Stapel L, Keefe T. Obtaining nationally representative samples of local news media outlets. *Mass Communication & Society*. 2005; 8:299–322.
- Long M, Slater MD, Lysengen L. US news media coverage of tobacco control issues. *Tobacco Control*. 2006; 15:367–372. [PubMed: 16998170]
- Nelkin, D. *Selling science: How the press covers science and technology*. New York: W. H. Freeman; 1995.
- Neuendorf, KA. *The content analysis guidebook*. Thousand Oaks, CA: Sage; 2002.
- Niederdeppe J, Fowler EF, Goldstein K, Pribble J. Does local television news coverage cultivate fatalistic beliefs about cancer prevention? *Journal of Communication*. 2010; 60:230–253. [PubMed: 20563221]
- Pew Research Center. Washington, DC: The Pew Research Center for The People and The Press; 2009a. Local TV a top source for swine flu news. May 6, 2009. Available at: <http://people-press.org/reports/pdf/514.pdf>. [Last accessed on July 30, 2010]
- Pew Research Center. Washington, DC: The Pew Research Center for The People and The Press; 2009b. Press accuracy rating hits two decade low. September 12, 2009. Available at: <http://people-press.org/reports/pdf/543.pdf>. [Last accessed on July 30, 2010]

- Pribble JM, Goldstein KM, Fowler EF, Greenberg MJ, Noel SK, Howell JD. Medical news for the public to use? What's on local TV news. *American Journal of Managed Care*. 2006; 12:170–176. [PubMed: 16524349]
- Project for Excellence in Journalism. A day in the life of the media. *The State of the News Media*, 2006. 2006 Available online at: http://www.stateofthemedial.org/2006/narrative_daymedia_intro.asp?.
- Riffe, D.; Lacy, S.; Fico, F. *Analyzing media messages: Using quantitative content analysis in research*. 2nd ed.. Mahwah, NJ: Lawrence Erlbaum Associates; 2005.
- Schudson, M. Deadline, datelines, and history. In: Manoff, RK.; Schudson, M., editors. *Reading the news*. New York: Pantheon; 1988. p. 79-108.
- Schwitzer G. Ten troublesome trends in TV health news. *British Medical Journal*. 2004; 329:1352.
- Slater MD, Long M, Bettinghaus EP, Reineke JB. News coverage of cancer in the United States: A national sample of newspapers, television, and magazines. *Journal of Health Communication*. 2008; 13:523–327. [PubMed: 18726810]
- Spratt JS. The primary and secondary prevention of cancer. *Journal of Surgical Oncology*. 1981; 18:219–230. [PubMed: 7311550]
- Stocking, SH. How journalists deal with scientific uncertainty. In: Friedman, SM.; Dunwoody, S.; Rogers, CL., editors. *Communicating uncertainty: Media coverage of news and controversial science*. Mahwah, NJ: Lawrence Erlbaum; 1999. p. 23-42.
- Tanner AH. Agenda building, source selection, and health news at local television stations: A nationwide survey of local television health reporters. *Science Communication*. 2004; 25:350–363.
- Tuchman, G. *Making news: An analysis of the construction of reality*. London, UK: The Free Press; 1978.
- Viswanath K. The communications revolution and cancer control. *Nature Reviews Cancer*. 2005; 5:828–835.
- Viswanath K, Blake KD, Meissner HI, Saiontz NG, Mull C, Freeman CS, Croyle RT. Occupational practices and the making of health news: A national survey of U.S. health and medical science journalists. *Journal of Health Communication*. 2008; 13:759–777. [PubMed: 19051112]
- Wallington SF, Blake K, Taylor-Clark K, Viswanath K. Antecedents to agenda setting and framing in health news: An examination of priority, angle, source, and resource usage from a national survey of U.S. health reporters and editors. *Journal of Health Communication*. 2010; 15:76–94. [PubMed: 20390978]
- Wang Z, Gantz W. Health content in local television news. *Health Communication*. 2007; 21:213–221. [PubMed: 17567253]
- Wang Z, Gantz W. Health content in local television news: A current appraisal. *Health Communication*. 2010; 25:230–237. [PubMed: 20461608]
- Weaver, DH.; Beam, RA.; Brownlee, BJ.; Voakes, PS.; Wilhoit, GC. *The American journalist in the 21st century: US, news people at the dawn of a new millennium*. Mahwah, NJ: Lawrence Erlbaum; 2006.

Table 1

Comparing Local TV News with National TV News in Including a Specific Person with Cancer

News Type		Story mentions a specific person with cancer?		
		No	Yes	Total
National TV News	Count	12	15	27
	Expected Count	9.1	17.9	-
	%	44.4%	55.6%	100.0%
Local TV News	Count	16	40	56
	Expected Count	18.9	37.1	-
	%	28.6%	71.4%	100.0%

Note: $\chi^2(1) = 2.05, p = .15$; Phi = .16; odds ratio = 2

Table 2

Comparing Local TV News with National TV News in Providing Information about Cancer Screening or Cancer Prevention

News Type		Story mentions cancer screening or cancer prevention?		
		No	Yes	Total
National TV News	Count	18	9	27
	Expected Count	21.5	5.5	-
	%	66.7%	33.3%	100.0%
Local TV News	Count	48	8	56
	Expected Count	44.5	11.5	-
	%	85.7%	14.3%	100.0%

Note $\chi^2(1) = 4.06, p = .04$; Phi = .22; odds ratio = 3

Table 3

Comparing Local TV News with National TV News in Citing Major Health Organizations

News Type		Story mentions major health organizations?		
		No	Yes	Total
National TV News	Count	20	7	27
	Expected Count	23.7	3.3	-
	%	74.1%	25.9%	100.0%
Local TV News	Count	53	3	56
	Expected Count	49.3	6.7	-
	%	94.6%	5.4%	100.0%

Note: Fisher's Exact Test $p = .01$ (2-sided); odds ratio = 6.18