Local News Media Framing of Obesity in the Context of a Sugar-Sweetened Beverage Reduction Media Campaign
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ABSTRACT
Objective: This study examined local news media’s framing of obesity preceding and surrounding the Philadelphia sugar-sweetened beverage reduction media campaign.
Methods: Using key search terms pertaining to obesity and sugary beverages, the authors searched the LexisNexis database and gathered local news stories (n = 167) that were aired or published between October, 2010 and March, 2011. They conducted a content analysis, coding for framing-related outcome measures (underlying factors, action steps, and contextual agents).
Results: Overall, the news media employed individual-level framing in the majority of stories when discussing obesity, both before and after the campaign launch. After the campaign launched, however, stories were significantly more likely to mention systemic-level contextual agents such as food companies (P = .008), beverage companies (P = .03), and champions or advocates (P = .001).
Conclusions and Implications: The researchers observed a shift in the local news media discourse toward more thematic framing of obesity, and suggest that public health officials consider the potential impact of news media frames on garnering public support for future policy implementations.
Key Words: mass media, health communication, news media framing, obesity, sugar-sweetened beverages (J Nutr Educ Behav. 2014; :1-6.)
Accepted April 4, 2014.

INTRODUCTION
Obesity, 1 of the leading preventable causes of death,1 has reached alarming rates in the US for children and adults. According to a report by the Centers of Disease Control and Prevention, 36% of adults age ≥ 20 years and 17% of young people age 2–19 years are estimated to be obese.2
To address this issue of obesity, the Centers of Disease Control and Prevention, as part of the Communities Putting Prevention to Work program, granted funding to the Philadelphia Department of Public Health (PDPH), along with 50 other communities nationwide, to help promote healthy lifestyle choices among children and adults. The PDPH coordinated “Get Healthy Philly,” a multi-pronged public health initiative with various components, 1 of which was a media intervention focused on reducing consumption of sugar-sweetened beverages (SSBs). Although obesity can hardly be attributed to 1 single cause, some research has noted a positive association between excess consumption of SSBs and obesity in both adults3 and children.4-6
The media campaign, which launched in mid-January, 2011, was composed of television and radio public service announcements as well as print ads. Cross-sectional telephone surveys conducted every 6 weeks during the 18-month campaign showed that by the second month of the campaign, 6 in 10 Philadelphians reported seeing ≥ 1 PDPH campaign messages in the past 30 days. By the final month, that number had reached 85%.7
Audiences develop their ideas about health from a variety of sources beyond public health campaigns. Several studies found that Americans reported getting the majority of their health-related information from news media.8,9 This has significant implications, especially when considering the potential influence of news frames. Frames emphasize certain aspects of an issue and make them more salient, thereby influencing the audience when recognizing the cause of the issue, evaluating the situation, and/or deciding on an appropriate solution.10 Depending on whether a frame is individualizing (ie, focusing on the individual and suggesting behavioral change) or systemic (ie, focusing on the government and/or other large institutions, and suggesting a need for solutions at the societal level), news coverage may influence what action is taken at the individual level or which policies are supported to address the problem.11 For example, when discussing obesity, an individualizing frame might focus on personal eating habits, whereas a systemic frame might discuss lack of access to healthy, affordable food.
Research has shown that individualizing frames are more common in general health reporting.12 Similarly,
analyses of news media coverage of obesity in past years found that the dominant tendency was for news to attribute blame to the individual by employing individual-level framing. \textsuperscript{13-15} Although there have been several studies concerning media coverage and framing of obesity, \textsuperscript{9,11,13-17} there is a lack of studies focusing on the framing of obesity in the context of a concurrent public health media campaign. Considering the possibility that a media campaign and news stories may provide contrasting information or convergent messages, \textsuperscript{18} especially when both are targeting the same local population, the current study investigated the way local news media in Philadelphia framed the issue of obesity and examined whether news media framing shifted once the anti-SSB media campaign was launched. By offering a systematic assessment of the local news media environment both preceding and during the PDPH’s media campaign, the current study examined the association between a public health media campaign related to obesity and local news media stories about obesity, thereby advancing the discussion of news media framing in the realm of public health.

\section*{METHODS

\subsection*{Procedures}

The researchers used content analysis to examine news media from 5 television stations (ie, ABC, NBC, CBS, Fox, and WHYY), 3 radio stations that included 2 local AM news channels and the public channel WHYY, 10 newspapers (ie, Philadelphia Inquirer, Philadelphia Daily News, Metro Philadelphia, Philadelphia Weekly, Philadelphia City Paper, Daily Pennsylvanian, South Philly Review, Al Dia, El Sol, and Philadelphia Sunday Sun), and 1 Web site (ie, http://www.Philly.com). These media channels were chosen because they were local to Philadelphia, meaning that Philadelphians had the opportunity to be exposed to these sources on a regular basis. Articles or transcripts that were aired or published between October, 2010 and March, 2011 were identified through a search of the LexisNexis database, using the key words obesity, childhood obesity, nutrition, physical activity, screen time, parenting, marketing, sugar-sweetened beverages, and soda tax. The latter 2 were included because of this study’s particular interest in the PDPH’s SSB-focused campaign. If the search yielded overly broad or irrelevant results, the key terms were searched in conjunction with each other. A subset of Philadelphia-specific articles was derived by searching Philadelphia within the broader results.

The researchers also used the same key search terms to search the individual archives of the same 20 news venues to confirm that all relevant articles were included. In the end, the complete search yielded a total of 167 news items, including newspaper articles (n = 63), television news transcripts (n = 52), radio transcripts (n = 26), and Web site articles (n = 26). A coding instrument was developed, and included operational definitions for key terms and variables that were of interest to the research. Six coders were trained over a 12-week period and double-coded 20% of the sample (n = 34). Cohen’s kappa statistic ($\kappa = 0.64$–1.00) was used to assess inter-rater reliability.

Review by the institutional review board was not required for this study because human subjects were not involved, as per US Department of Health and Human Services guidelines.\textsuperscript{19}

\subsection*{Measures}

To examine how news media frame obesity, coders identified underlying factors that are seen as causing obesity, action steps that are suggested for addressing obesity, and contextual agents that are connected to the issue of obesity.

Underlying factors were defined as elements that were mentioned in the stories as being the cause of obesity. Potential underlying factors of obesity included lack of access to nutritious food, price of food, overeating or eating unhealthy, consumption of SSBs, lack of exercise, school lunches, stress, sedentary behavior, food marketing, built environment, and poverty.\textsuperscript{20}

Action steps were defined as concrete suggestions intended to help address obesity, including changes related to food consumption, beverage consumption, exercise, and sedentary behavior. These suggestions were not specific to individual behavior, and could be aimed at bringing about change at the organization, community, or policy level.

Contextual agents were specific actors, groups, or institutions in one’s social environment that were mentioned in the story as being connected to, or forming the context around, the issue of obesity, such as the individual himself or herself, family, school, workplace, place of religious worship, community, media and celebrities, champions and advocates, government, health care professionals, food companies, beverage companies, and media companies.

All variables were dichotomous, where 0 represented not present and 1 indicated present. Coders were instructed to check 1 for all relevant variables within each measure, which resulted in a possible combination of multiple underlying factors, contextual agents, and/or actions steps per story. To look at differences in framing with regard to the timing of the PDPH media campaign, coders took note of whether each news item was published or broadcast before or during the campaign.

\section*{Data Analyzes}

The authors used descriptive analyses to examine the prevalence of individual-level vs systemic-level framing within each measure, and conducted chi-square tests of independence to assess differences in framing on all variables from before and during the campaign. The level of statistical significance for all tests was $P < .05$ (SPSS 19.0, IBM, Armonk, NY, 2010).

\section*{RESULTS}

During the 15 weeks before the campaign launched, there were 82 news stories about obesity. After campaign messages began airing in mid-January, there were 85 stories over the course of 11 weeks, with a visible spike immediately after the campaign launch (Figure 1).

Of all stories, 112 (67.1\%) included $\geq 1$ underlying factors for obesity. Overall, the local news media in the Philadelphia market more frequently
framed obesity as an individual-level problem, emphasizing causes such as overeating and/or eating unhealthily (present in 78, or 69.6% of stories that mentioned any underlying factors), lack of exercise (n = 38; 33.9%), and SSB consumption (n = 26; 23.2%). By comparison, systemic-level causes of obesity, such as the inability to access healthy food (n = 20; 17.9%) and the price of healthy food (n = 14; 12.5%), occurred less frequently. Figure 2 shows the frequency of all underlying factors.

Of all stories, 64 (38.3%) provided action steps. Individual-level action steps were present in 51 of those stories (79.7%), with the majority pertaining to food choice (eg, “choose fruits and vegetables over high-calorie foods”). Action steps recommended at the sociopolitical level were present in only 13 of stories containing any action steps (20.3%) and were mostly related to food (eg, “government should establish farmers’ markets in low-income neighborhoods”) or other issues (eg, “politicians should lower weight requirements for bariatric surgery”). Few stories mentioned steps that could be taken at the organization (n = 5; 7.8%) (eg, “doctors should speak with parents about their child’s body mass index from a younger age”) or community level (n = 1; 1.6%) (eg, “people should support neighborhood gardens”).

Figure 2 also shows the frequency with which different contextual agents were mentioned as connected to the problem of obesity. The majority of stories mentioned ≥ 1 contextual agents (n = 144; 86.2%). The individual (ie, self) was identified most frequently as a contextual agent, and was present in more than half of all stories that mentioned any contextual agents (n = 82; 56.9%); the government (n = 67; 46.5%), and family (n = 44; 30.6%) were mentioned second and third most often.

The chi-square test results revealed significant differences in the framing of contextual agents in relation to the campaign launch. Food companies (χ² (1) = 7.052; P = .008), beverage companies (χ² (1) = 4.505; P = .03), and champions/advocates (χ² (1) = 11.742; P = .001) were more likely to be mentioned in connection to obesity after the campaign launch than before. None of the other contextual agents, underlying factors, or action steps showed significant differences before and after the campaign launch.

DISCUSSION

Findings from this study suggest that between October, 2010 and March, 2011, the local news media in 1 major market more often framed obesity as an individual issue, rather than a public one. Not only did the media refer to the individual and/or family as the contextual agent linked to obesity in more than half of all stories, the most common underlying factors present in stories were individual-level. Approximately one third of all stories provided concrete suggestions to combat obesity at the individual level. These findings parallel earlier studies that found the framing of causes and solutions of obesity to be individualizing rather than systemic.13-15

Of particular interest to this study was whether the introduction of a media campaign focused on an obesity-related behavior is correlated with changes in local news media framing. In terms of differences before and after the launch of the PDPH campaign, there was a subtle shift in the media discourse such that news stories were significantly more likely to mention food and beverages companies as contextual agents of obesity after the campaign began. This suggests a slight shift toward more systemic framing of what was traditionally individually framed topic.13,15 As suggested by Hawkins and Linvill, framing the underlying factors (or causes) and action steps (or solutions) at the systemic level may help initiate changes in public policy. Admittedly, the PDPH campaign was only associated with increases in simple mentions of some of the systemic actors as contextual agents in the news media. Nonetheless, this study shows that although the general local news media discourse seem to focus mostly on individual-level factors of obesity, the launch of the PDPH media campaign seemed to coincide with a slight increase in media attention to systemic-level elements that contribute to an increased prevalence in obesity.

One possible explanation for this potential association between the local health campaign and local news media coverage is that the latter may provide information that reinforces the messages disseminated by the former, especially considering that both are targeting the same local population. This association may be supported by theories, such as Klapper’s phenomenistic theory, which suggest that not only does the public depend on the media for
information,8,9 but the media also attempt to reflect the majority public opinion and reinforce the status quo.21 If an informational public health campaign can shape the public’s beliefs about obesity, the news media may reflect those changed beliefs in their framing of obesity. In turn, changes in news coverage could adjust the beliefs of higher-level socio-political groups that obesity is not purely an individual issue but 1 that needs to be dealt with at multiple levels, including public policy. Although the current study only provides preliminary findings that media campaign messages and news media coverage are associated in particular domains, it suggests that this could be a fruitful area of inquiry as research on public perception of the causes and consequences of obesity progresses.

This study was limited by time frame and sample size, because the data were collected with the specific purpose of tracking news coverage before and during a particular health communication campaign. Furthermore, the data were compiled from a local sample of news media in 1 large, Northeastern media market. Thus, the results of this study may not be generalizable to news media in other localities or on a national level, or in contexts that do not involve anti-SSB campaigns.

Another caveat to consider when interpreting the results is that post-campaign analyses were conducted up to 11 weeks after the campaign started, rather than the intended 15 weeks that would have been parallel to the time frame of the pre-campaign analyses. The decision to drop the data that were collected in the last 4 weeks was because of the amount of missing data (resulting from discrepancies in data recording) that hindered the necessary analyses. However, 11 weeks is still a substantial amount of time relative to the time span of the current study, and the findings from this time period should not be neglected.

The PDPH media campaign is 1 of several components comprising a larger intervention known as Food Fit Philly. These other components include programs that publicize the benefits of healthy eating and exercise, some or all of which may have also contributed to this study’s finding regarding the shift in news media’s framing of obesity. The possibility that the Food Fit Philly initiative as a whole, rather than only the media campaign, influenced news media’s framing of obesity speaks to the importance of public health campaigns transmitting a consistent message in all communication venues.

During the time frame in which the sample was collected, there was also an ongoing debate in the city regarding the implementation of a soda tax. Exposure to such conversations may have affected the frequency with which beverage companies were mentioned in the news. However, such mentions significantly increased after the campaign launch, whereas the soda tax debate was ongoing.

![Figure 2. Rankings by percentage of individual- and systemic-level underlying factors and contextual agents mentioned in local news stories. The top graph shows the frequency at which different underlying factors were mentioned in news stories pertaining to obesity. The bottom graph shows the frequency at which different contextual agents were mentioned in news stories pertaining to obesity. Variables for both graphs are listed in order of frequency, according to aggregated pre- and post-campaign results. The striped bars on the left represent pre-campaign results, whereas the solid bars on the right represent results from after the campaign launch. *Variables that showed a significant difference after the campaign launch compared with pre-campaign (P < .05). Note: Coders were instructed to note all underlying factors and contextual agents in each story, so percentages do not add up to 100%.](image-url)
throughout the entire time frame, which suggests that the debate does not entirely explain the pattern of findings. Nonetheless, it points to the broader importance of considering the larger contexts within which a health media campaign is implemented when making conclusions about that campaign’s effects.

**IMPLICATIONS FOR RESEARCH AND PRACTICE**

Future research may benefit by considering the various contexts surrounding a particular campaign, including instances of countermarketing. For example, the beverage industry, whose profits would likely decrease if a campaign were effective in reducing SSB consumption, may be invested in increasing their advertising in areas that are publicly preparing for, or have already initiated, such health campaigns. This could, in turn, affect the effectiveness of the media intervention, as well as researchers’ interpretations of those effects.

Dorfman and colleagues\(^{12}\) argued that changing the environment is the best way to improve the overall health of a population. They suggested that in addition to encouraging individuals to change their personal eating and exercise habits, it would be beneficial to foster public policies that increase opportunities for more activity (eg, improvements to the built environment) and better nutrition (eg, access to healthy and affordable food) for all members of society, regardless of weight status. As the findings of this study suggest, along with other recent studies,\(^{13-15}\) the current framing of obesity in the news media does not call for much attention at the environmental, sociopolitical level. Shifting the news framing of obesity toward increased recognition of systemic-level causes and solutions could make the general public more amenable to systemic-level health policies,\(^{9}\) as well as increase the prevalence of the issue among policy makers. For example, increasingly framing the food and beverage industry as being responsible for causing and providing the solutions for obesity could induce policy makers to require food and beverage companies to reformulate products to meet certain nutritional standards or to place health advisory labels on SSBs, as well as garner public support for such policies.

This study provides only descriptive findings in terms of the relationship between a local public health media campaign and the news media within the same media market, but future research should attempt to evaluate the presence of actual causation as well as the direction of change. For example, future studies might track press releases and press conferences by local health departments to determine whether and how they are directly associated with local news stories on the topic. Moreover, media campaign developers may benefit from further research into the themes that they can apply to their messages, keeping in mind the impact they may have on public perceptions as well as news media coverage. If the link between news media and the campaign context in which they exist becomes clearer, public health officials may wish to implement policies and corresponding media campaigns concurrently, in the hopes that the latter may cause news media to shift their framing of the health issue in question, leading to increased prevalence of the issue on policy makers’ agendas, as well as heightened public support for the policies put forth.

**ACKNOWLEDGMENTS**

The authors Fashina Mira Aladé, MA, and Shonna Kydd for assistance with gathering and coding the data. The authors also thank the anonymous reviewers for helpful comments in improving the quality of this article.

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