Framing marijuana: How U.S. newspapers frame marijuana legalization stories (1995–2014)☆

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ABSTRACT

Marijuana legalization has been one of the most controversial issues in the public health field. Since news frames can influence the public's perceptions about public health policy including marijuana legalization, it is important to understand how the media report this issue. Thus, we explore how U.S. newspapers present marijuana legalization stories, examining two key dimensions of framing: an organizing theme and a story tone. We analyzed news articles of national and regional newspapers between 1995 and 2014 ($N = 640$). Findings revealed that newspapers have largely presented marijuana legalization as a law enforcement issue, rather than an economic issue or a medical issue. Marijuana legalization has been differently presented according to each presidential period. Overall, marijuana legalization stories have been described using a neutral tone. However, findings showed that newspapers that were classified as politically liberal adopted a positive tone more frequently than newspapers that were classified as conservative. Our findings can help public health providers or policy makers understand the relationships between news stories and public opinion toward marijuana legalization. Conclusively, this study can provide a comprehensive analysis of news framing of marijuana legalization, examining two key dimensions of framing: organizing theme and story tone.

1. Introduction

Marijuana is the most frequently used illegal drug in the United States (Cerda et al., 2012; Wilkinson et al., 2016). In August 2013, the U.S. Department of Justice announced an updated marijuana enforcement policy, making clear that marijuana remains illegal federally (Department of Justice, 2013). In recent years, however, the public health policy regarding marijuana legalization has been swiftly changing in the United States. As of April 2018, nine states – Alaska, California, Colorado, Maine, Massachusetts, Nevada, Oregon, Vermont, and Washington – and the District of Columbia (DC) have enacted laws to authorize the production, distribution, and possession of marijuana. A total of 29 states and DC have allowed medical use of marijuana for patients with approved health conditions. States with medical marijuana laws have an evident form of patient registry, and they provide protection against arrest for possession up to a limited amount of marijuana for medical use (National Conference of State Legislatures, 2014).

In the U.S., marijuana legalization may be one of the most controversial issues including legal, policy, health, and economic considerations. For example, marijuana legalization has been a highly contested public health issue between state and federal drug laws (Golan, 2010). Also, the essential question may be whether marijuana has medical value. The national controversy over marijuana legalization has included discussion of both the benefits and risks of nonmedical marijuana use (American Public Health Association, 2014; Finkel, 2007). Additionally, it is important to consider economic effects of marijuana legalization (Caulkins et al., 2012).

Communication researchers have examined how the news media can influence public perceptions or attitudes toward certain issues by using the notion of framing (Scheufele, 1999). According to Gamson and Modigliani (1989), a frame refers to a key organizing theme or idea that provides meaning to issues or events reported in a news story. A frame is an idea organizer that packages an issue in a specific way, telling what the issue is about (Kim et al., 2014). Media frames suggest how the public can interpret an issue or event, and framing involves selection and salience (Entman, 1993). Thus, news framing can influence the public's perceptions about public health policy including marijuana legalization (Scheufele and Tewksbury, 2007). Drugs have been described mainly as objects of government enforcement and

negative connotations of use in the mainstream news outlets (Slater et al., 2006). In the issue of marijuana legalization, a variety of organizing themes can be presented. For example, a marijuana legalization story can be framed as a legislation issue (Block, 2017; Golan, 2010; Lewis et al., 2015), in which news stories primarily emphasize the legislative proceedings regarding marijuana use and marijuana legalization. Previous studies have explored how American news media frame the marijuana policy, including medical use of marijuana (Golan, 2010; Vickovic and Fradella, 2011) and recreational use of marijuana (McGinty et al., 2016). Analyzing newspaper articles between June 2008 and June 2009 (from the Bush administration to the Obama administration), Vickovic and Fradella (2011) found that U.S. newspapers mainly discussed medical marijuana as legal and regulatory issues and passage of medical marijuana news.

Although it is very prominently discussed in terms of public health, legal, policy, and economic perspectives, researchers had paid little attention to how the media presented this issue. In order to reduce the gap in the literature, we make an attempt to comprehensively investigate media frames about marijuana legalization. First, we examine the *organizing theme* of marijuana legalization stories (Gamson and Modigliani, 1989). More specifically, this study investigates how U.S. newspapers present the issue of marijuana legalization from 1995 to 2014. Also, we look at whether the frequency of organizing themes remains steady or not over time. As a recent survey (Pew Research Center, 2016) shows, public opinion on legalizing marijuana has dramatically changed. The time period of this study ranges from 1995 to 2014. Therefore, we put first research questions as below:

RQ1a. What are the major organizing themes that emerge in newspaper coverage of marijuana legalization?

RQ1b. How have organizing themes changed over time, 1995 through 2014?

Second, we explore the *tone* of each news article (Ghanem, 1997). Specifically, this study examines how the tones of marijuana legalization are presented and changed over time between 1995 and 2014. Coleman et al. (2009) suggest that story tone assumes affective perspective, providing the story a positive, neutral, or negative connotation. Affective attributes consider audience's emotional responses to media stories (Ghanem, 1997). Examining the tone of ethanol stories in U.S. newspapers, for example, Kim et al. (2014) categorized story tone into pro-ethanol, anti-ethanol or neutral. They found that 48% of stories described a bio-fuel issue as neutral. In this study, the story tone refers to answering the question of whether the story is overall in support of or in opposition to marijuana legalization. Additionally, the political orientation of news outlets has been considered as a major factor that can influence the tone of news stories (Scheufele, 2000). The issue of marijuana legalization has been divided and debated across political stances (Pew Research Center, 2015). Thus, it can be predicated that liberal newspapers tend to describe marijuana legalization with a positive tone more often than conservative newspapers. The following research questions and hypothesis are posed:

RQ2a. Overall, what is the tone of marijuana legalization stories?

RQ2b. How has the tone of marijuana legalization stories changed over time, 1995 through 2014?

H1. The tone of newspaper coverage will be more positive in liberal newspapers than conservative newspapers.

2. Methods

2.1. Study sample

To select newspapers from both states where marijuana is allowed and illegal, we analyzed a total of 10 newspapers published in the United States. Considering the location, circulation, and political orientation of newspapers, three categories were selected for analysis: national newspapers (the *New York Times*, the *Wall Street Journal*, and the *Washington Post*), newspapers in states where marijuana is illegal (the *Dallas Morning News*, the *Tampa Tribune*, the *Columbus Dispatch*, and the *Tulsa World*), and newspapers in states where medical marijuana is legal (the *Seattle Times*, the *Denver Post*, and the *San Francisco Chronicle*). These newspapers were available at the search databases (the *Lexis-Nexis*, the *News Bank*, and the *Factiva*). According to the 2008 and 2012 presidential endorsements (Peters & Woolley, 2015), liberal newspapers include the *New York Times*, the *Washington Post*, the *Denver Post*, the *Seattle Times*, and the *San Francisco Chronicle*, while others are conservative newspapers.

News articles were retrieved using a key word search of three search engines: the *Lexis-Nexis*, the *News Bank*, and the *Factiva* databases. The keywords "medical marijuana" OR "marijuana use" OR "marijuana legalization" OR "legal marijuana," appearing in the headline or the lead paragraph (HLEAD) of the *Lexis-Nexis* database, in the lead or first paragraph of the *News Bank* database, and in the text of the *Factiva* database were used to find articles of coverage selected for this study between 1995 and 2014.

This search yielded a total of 4186 articles – including editorials – from the 10 newspapers, and we produced a manageable systematic random sample of about 75 articles from each paper (total *N* = 698). This study excluded unrelated stories where marijuana was simply mentioned without being the main focus or where reported marijuana-related crimes. After excluding these unrelated articles, a total of 640 articles were analyzed.

2.2. Coding procedure

The coding instrument was developed through a comprehensive review of news stories and previous studies. Coding was conducted by one of the authors and one graduate student. Coders first read a story carefully, and then decided an organizing theme of each story by examining what was the main focus. Because researchers paid little attention to examining news frames of marijuana legalization, more than 100 news articles were carefully reviewed to find out organizing themes in stories related to marijuana legalization and medical marijuana. Then, six organizing themes were identified after examining marijuana legalization stories and previous studies (e.g., Golan, 2010; Lewis et al.,

Table 1
Description of organizing themes.

Organizing theme	Description
Legislation	The story focuses on the legislative proceedings regarding marijuana use. This theme highlights the conflicts between the governor and state legislature.
Law enforcement	The story focuses on law enforcement, operating procedures, regulations, controls, or actions about marijuana use. Also, this theme includes marijuana-related lawsuits or trials.
Youth drug use	The story focuses on the marijuana use of teenagers.
Economy	The story presents marijuana legalization focused on tax and economic effects such as new employments and revitalizing regional economies.
Patients	The story highlights patients' story about marijuana use. This theme mainly involves compassion or plight of patients and their family.
Medical effects	The story focuses on the debates with regard to medical effects or benefits of marijuana. Also, the story focuses on scientific research. Mostly this frame reports medical marijuana research.

2015). Each story was categorized into one of the six organizing themes: *legislation, law enforcement, youth drug use, economy, patients,* and *medical effects*. When coders found more than two themes in an article, they checked both. The description of organizing themes is presented in Table 1.

Coders then coded overall tones of a story. This study used the way to indicate overall tones examined by the previous studies (e.g., Einsiedel, 1992; Kim et al., 2014). Coders first decided that each paragraph was positive, neutral, or negative toward medical or recreational use of marijuana. There were three major considerations to examine: (1) what was emphasized in the headline and lead, (2) how the balance or imbalance of the pros and cons of marijuana use were described, and (3) how the metaphor mentioned in each story were related to positive or negative social norms. Coders then decided story tone as an ordinal category by classifying 1 to a negative, 2 to a neutral, or 3 to a positive story. When at least two-thirds of the paragraphs could be considered as either negative or positive, coders selected one of either category. Otherwise, the story was coded as neutral.

Two coders coded articles after having conducted a series of training and pilot-test sessions. Intercoder reliability was calculated by double-coding a random subsample ($n = 105$ or 16.4%) of the data. Intercoder reliability corrected for agreement by chance (Krippendorff's Alpha) ranged between 0.79 (*law enforcement*) and 1.00 (*youth drug use, economy, patients*) with an average reliability of 0.88.

3. Results

3.1. Organizing themes

As Table 2 shows, U.S. newspapers were most likely to present marijuana legalization as a *law enforcement* theme (44.5% or $n = 285$). Approximately 31% of articles ($n = 200$) described marijuana legalization as a *legislation* theme. A McNemar's chi-square test indicated that the difference between a *law enforcement* theme and a *legislation* theme was statistically significant ($\chi^2 = 16.21$, $p < .001$). The next frequent themes were an *economy* theme (10.2%), a *medical effect* theme (9.8%), a *youth drug use* theme (8.1%), and a *patients* theme (3.6%).

Fig. 1 shows the percentages of articles presenting specific organizing themes, 1995 through 2014. Newspapers presented more often a *legislation* theme during the first Bush administration period (2001 to 2004) and the second Obama administration period (2013 to 2014) compared to other presidential periods ($\chi^2 = 16.15$, $p < .01$). A *law enforcement* theme was significantly and frequently reported during the Bush administration period (2001 to 2008) ($\chi^2 = 34.43$, $p < .001$). A *youth drug use* theme was highly discussed during the Clinton administration period (1995 to 2000) ($\chi^2 = 54.42$, $p < .001$). On the

contrary, an *economy* theme was chiefly debated during the Obama administration period (2009 to 2014) ($\chi^2 = 48.89$, $p < .001$). A *medical effect* theme was significantly and frequently presented during the second Clinton administration period (1997 to 2000) ($\chi^2 = 19.11$, $p < .01$). Thus, organizing themes were differently presented according to each presidential period.

3.2. Story tone

Table 3 shows that among the 640 articles, 27% ($n = 173$) were coded as positive; 17.7% ($n = 113$) were negative; and more than half (55.3% or $n = 354$) were neutral. The *New York Times*, the *Seattle Times*, and the *Columbus Dispatch* were more likely to describe the issue of marijuana legalization as a positive tone, while the *Wall Street Journal*, the *Dallas Morning News*, the *Tulsa World*, and the *Columbus dispatch* tended to present the issue as a negative tone.

Fig. 2 shows the percentages of story tone according to the presidential periods, 1995 through 2014. News articles with a negative tone were more likely to be reported during the Clinton administration period (1995 to 2000) and the second Obama administration period (2013 to 2014). On the other hand, stories with a positive tone were frequently presented during the second Clinton administration period and the Bush administration period (1997 to 2008) A chi-square test indicated this pattern was significantly different according to the presidential periods ($\chi^2 = 25.12$, $p < .01$).

To examine any difference of the tone according to political orientation of newspapers (H1), a comparison between the liberal and conservative newspapers has made. Findings indicated that a positive story tone was more often used in the liberal newspapers ($M = 2.21$, $SD = 0.59$) than in the conservative newspapers ($M = 1.94$, $SD = 0.73$). This difference was statistically significant ($t = 5.25$, $p < .001$), supporting H1.

4. Discussion

This study aims to answer the question of how U.S. newspapers have presented the issue of marijuana legalization between 1995 and 2014. Newspapers have largely described marijuana legalization as a *law enforcement* issue rather than an *economic* issue or a *medical* issue. Taken together, our findings are consistent with previous studies that have revealed that marijuana has been mainly discussed as a legal and policy issue (Golan, 2010; Lewis et al., 2015; McGinty et al., 2016). Framing can affect the way the readers evaluate a certain issue, influencing their judgment (Gamson and Modigliani, 1989). Thus, it can be argued that Americans are more likely to evaluate marijuana legalization as a public policy issue, rather than a public health issue.

Table 2
Number and proportion of organizing themes in marijuana legalization stories, 1995–2014.

Theme		NYT	WSJ	WP	DP	ST	SFC	DMN	TT	CD	TW	Total
Legislation	N	19	19	28	19	22	9	16	39	16	13	200
	%	26.0	27.5	37.8	23.8	32.8	12.5	24.2	60.0	45.7	33.3	31.3
Law enforcement	N	34	30	29	43	31	54	23	20	5	16	285
	%	46.6	43.5	39.2	53.8	46.3	75.0	34.8	30.8	14.3	41.0	44.5
Youth drug use	N	5	8	6	3	6	0	11	4	6	3	52
	%	6.8	11.6	8.1	3.8	9.0	0.0	16.7	6.2	17.1	7.7	8.1
Economy	N	10	14	8	14	8	2	2	3	2	2	65
	%	13.7	20.3	10.8	17.5	11.9	2.8	3.0	4.6	5.7	5.1	10.2
Patients	N	5	0	2	3	1	2	3	3	3	1	23
	%	6.8	0.0	2.3	3.8	4.5	2.8	4.5	4.6	8.6	2.6	3.6
Medical effect	N	9	7	8	2	10	4	9	6	5	3	63
	%	12.3	10.1	10.8	2.5	14.9	5.6	13.6	9.2	14.3	7.7	9.8
Others	N	2	3	4	3	1	2	1	1	0	0	17
	%	2.7	4.3	5.4	3.8	1.5	2.8	1.5	1.5	0.0	0.0	2.7
Number		73	69	74	80	67	72	66	65	35	39	640

Note: NYT, the *New York Times*, WSJ, the *Wall Street Journal*, WP, the *Washington Post*, DP, the *Denver Post*, ST, the *Seattle Times*, SFC, the *San Francisco Chronicle*, DMN, The *Dallas Morning News*, TT, the *Tampa Tribune*, CD, the *Columbus Dispatch*, TW, the *Tulsa World*.
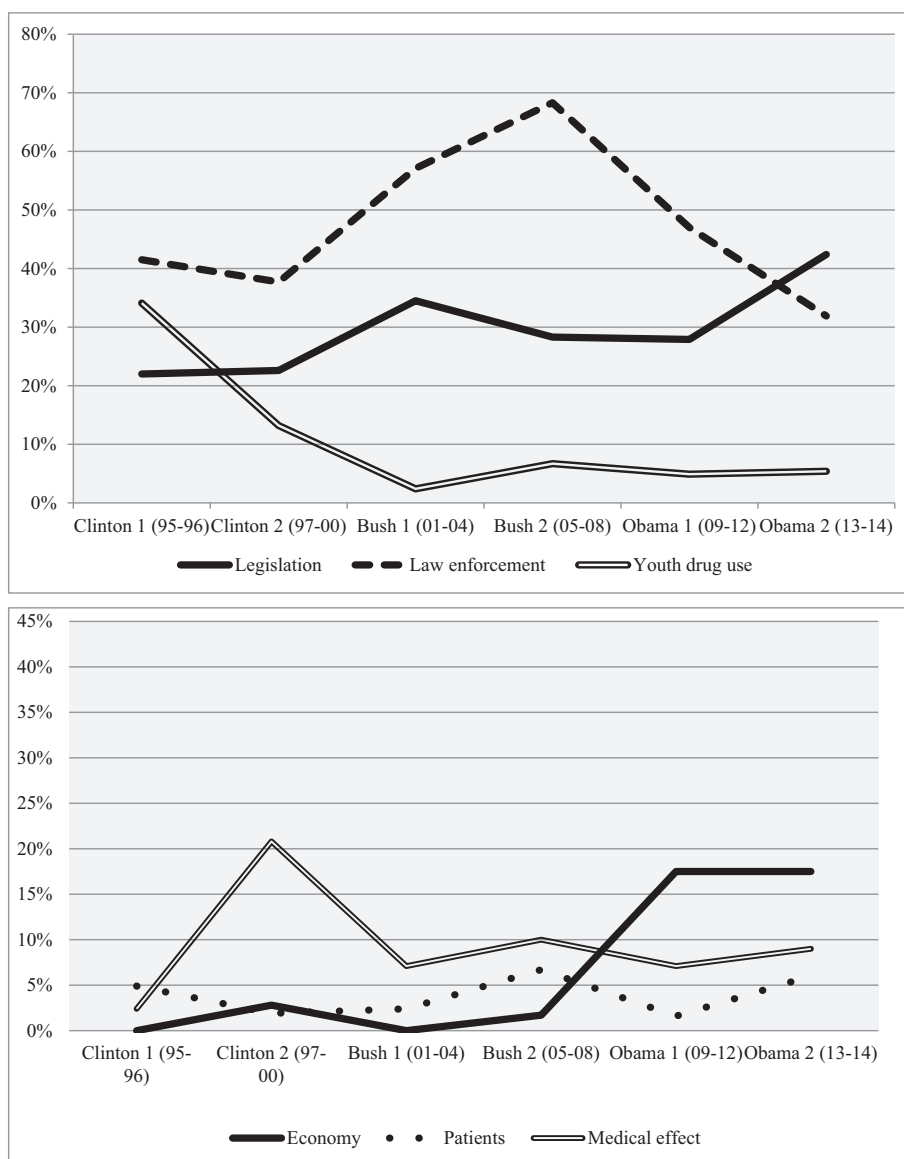
Fig. 1. Percentage of articles reporting specific organizing themes over presidential periods, 1995–2014 (*N* = 640 news articles).

Table 3
Number and proportion of story tone in marijuana legalization articles, 1995–2014.

Tone		NYT	WSJ	WP	DP	ST	SFC	DMN	TT	CD	TW	Total
Negative	N	4	20	9	11	7	1	25	19	8	9	113
	%	5.5	29.0	12.2	13.8	10.4	1.4	37.9	29.2	29.2	23.1	17.7
Balanced	N	42	37	41	58	36	48	27	32	14	19	354
	%	57.5	53.6	55.4	72.5	53.7	66.7	40.9	49.2	40.0	48.7	55.3
Positive	N	27	12	24	11	24	23	14	14	13	11	173
	%	37.0	17.4	32.4	13.8	35.8	31.9	21.2	21.5	37.1	28.2	27.0
Number		73	69	74	80	67	72	66	65	35	39	640

Note: NYT, the *New York Times*, WSJ, the *Wall Street Journal*, WP, the *Washington Post*, DP, the *Denver Post*, ST, the *Seattle Times*, SFC, the *San Francisco Chronicle*, DMN, the *Dallas Morning News*, TT, the *Tampa Tribune*, CD, the *Columbus Dispatch*, TW, the *Tulsa World*.

There can be several explanations for these findings. First, marijuana legalization is essentially the theme about the legislative acts. A number of legislative measures that allow for recreational use of marijuana (e.g., California Proposition 64 of 2016) have been passed since 2012. Second, marijuana stories often involved conflicts between federal and state governments, between enforcement agencies and citizens, and between governors and congresses. The conflict perspective is a popular frame because conflict is a recognized news value (Bennett, 2009). Thus, this conflict may influence journalists to report marijuana stories as a *law enforcement* theme (Kim et al., 2014). Third, a *medical effect* theme and a *patients* theme might appear less often because we examined stories related to recreational use as well as medical use. Nonetheless, criticism of newspapers' tendency to define marijuana stories as *legislation* or *law enforcement* stories may be justified. Because
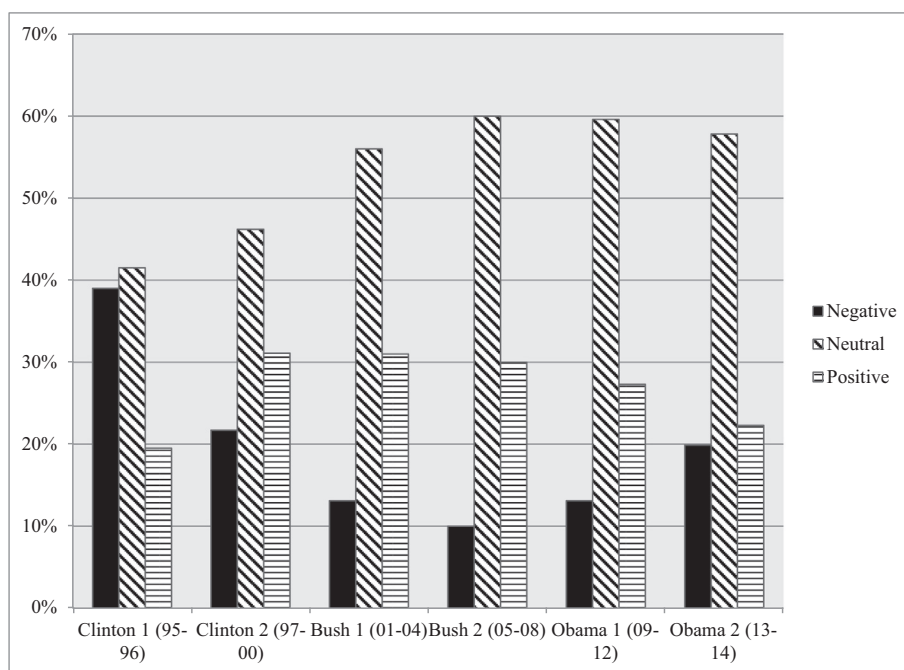
Fig. 2. Percentage of story tone over presidential periods, 1995–2014 (*N* = 640 news articles).

these themes were clearly dominant, the issues surrounding medical marijuana were not commonly highlighted in the news. Although the issue of marijuana is important in terms of public health approach (Wilkinson et al., 2016), our findings indicated that journalists paid little attention to the *medical effect* theme when covering marijuana stories.

Our findings also revealed that organizing themes appeared differently according to the presidential periods. First, newspapers frequently described marijuana stories with a *legislation* theme during the Obama administration period. Since Colorado and Washington initially allowed for recreational use of marijuana in 2012, other seven more states have followed. As Griffin et al. (2013) pointed out, the passage of marijuana laws significantly increased news stories. During this period (2009–2014), frequent legislative activities caused media attention. Second, an *economy* theme more frequently appeared since 2009. Block (2017) also found that marijuana legalization was discussed mainly as a business issue in 2014. In particular, many news stories reported the expected and actual economic effects of legalization during those years. Third, a *youth drug use* theme peaked during the first Clinton administration period, and then it has decreased. Interestingly, according to Monitoring the Future survey (National Institute on Drug Abuse, 2017), the actual use among youth was somewhat declined between 1995 and 2008. Thus, newspapers probably reflected this trend.

Although more than half articles (55.3%) described the issue of marijuana with a neutral tone, positive stories (27%) were published more frequently than negative stories (17.7%, Table 3). These findings can be explained by *two-sided framed* stories, which often result in a neutral tone. As Sniderman and Theriault (2004) indicate, the public should make choices between several competing values in real politics. In a two-sided (or mixed) frame, a story presents both frames of an issue (Borah, 2011; Chong and Druckman, 2010). For example, the media may present reasons to both support and oppose marijuana legalization in the same story. Over the past decade, the political discourse around marijuana legalization has been dominated by competing frames over the legal, law enforcement, economic, and public health consequences of proposed state and federal government policies (Golan, 2010; McGinty et al., 2016). These two-sided or non-framed articles likely present the issue with a neutral tone.

Our findings have several limitations. First, we examined only newspapers. If marijuana stories were retrieved from other sources for 20 years, 1995 to 2014, it could be very hard to manage the sample. Thus, one of the major reasons to analyze only newspapers was to obtain a manageable sample size. Also, newspapers still provide a useful channel to deliver information, as they can play a key role in setting the agenda for other news media (Lewis et al., 2015; Wakefield et al., 2003). In addition, many mainstream newspapers have provided their online versions through their own webpages and social media. Thus, news stories from these newspapers can be widely exposed to Americans. Future research should include other news sources. Second, the selection of newspapers has limitations. Because some newspapers were not available through online search engines, we examined less representative newspapers, which can cause concerns regarding the generalizability of the findings. Thus, it is necessary for future research to include more representative newspapers as much as possible. Third, it can be pointed out that the categories of themes were inductively determined because there have been only a few previous studies on the topic of marijuana legalization. The coding categories used in this study may raise questions about the results in terms of validity and reliability. Thus, future studies should test the same categories that this study used and then develop more correct coding categories. Lastly, the time period for this study was between 1995 and 2014. Although marijuana was initially legalized in 2012, the first recreational sales were in 2014. Thus, news stories during 2014 could be quite different than stories from previous years.

5. Conclusions

Although researchers have paid little attention to systematically analyzing marijuana legalization stories, there are a growing number of studies that assess the various impacts of marijuana legalization that have been published in recent years. This study can provide useful information for practical implications. Research on the framing of marijuana legalization is important, as the way in which this issue is framed can change or shape public opinion (e.g., Price et al., 1997). In practice, attitudes about marijuana policies may influence marijuana policy. Our findings can help public health providers or policy makers understand

the relationships between news stories and public opinion toward marijuana legalization. In addition, previous studies (e.g., Golan, 2010; McGinty et al., 2016) examined media framing of either medical use or recreational use of marijuana, not both. Such analyses might focus on only one aspect of the broader public debate surrounding marijuana. However, we analyzed news frames of both medical and recreational use of marijuana to better examine the public's understanding of marijuana and media coverage of this issue. Conclusively, this study provides an initial and comprehensive analysis of news framing of marijuana legalization, examining two key dimensions of framing: organizing theme and story tone.

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