Race, Geography, and News Coverage of the Opioid Epidemic

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RACE, GEOGRAPHY, AND NEWS COVERAGE OF THE OPIOID EPIDEMIC

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
In partial fulfillment of the
Requirements for the degree of
Master of Mass Communication

In

The Manship School of Mass Communication

by
Nicholas Brandon Robert
B.A., Southeastern Louisiana University, 2012
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Thank you to my thesis committee: Dr. Josh Grimm, Dr. Hyojung Park, and Dr. Lance Porter. A special thanks to Dr. Grimm for serving as my thesis chair and providing much needed encouragement throughout the process.

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ABSTRACT

The opioid epidemic is the deadliest drug epidemic in United States history. During the early stages of the epidemic, the focus was on white victims in rural and suburban areas. Using the geo-ethnic framework developed from immigration research, this study examines if geography and race impacted the framing of the opioid epidemic in newspapers. The study finds there to be a low level of geo-ethnic influenced framing.
CHAPTER 1. INTRODUCTION

The United States is in the midst of an opioid crisis that has reached epidemic levels and has been declared the nation’s deadliest drug overdose crisis (American Society of Addiction Medicine, 2016). According to Centers for Disease Control and Prevention (CDC) data, 700,000 people died between 1999-2017 from a drug overdose (CDC, 2018a). Opioid overdoses accounted for 399,000, or 58%, of those deaths (CDC, 2018a).

In 2017, the latest year with data calculated, 70,000 people died from a drug overdose, the most ever recorded in a single year (CDC, 2019a). Of the 70,000 deaths, 47,600 (67.8%) were attributed to opioid overdose (CDC, 2019a). In March 2017, President Donald Trump declared the epidemic a national public health emergency, referring to it as the “worst drug crisis in American history” (Johnson & Wagner, 2017).

A 2016 Gallup poll found that 4 in 10 Americans view heroin and prescription painkillers as a serious problem in their area (Gallup Poll, 2016). In 2018, a Pew Center Research poll found a majority of Americans view drug addiction as a problem in their local community (Pew Research Center, 2018). The poll found that 9 in 10 Americans living in a rural area say drug addiction is a problem in their community. In addition, 87% of respondents in urban areas said that drug addiction is a problem in their community along with 86% of individuals in suburban areas.

The CDC has categorized the epidemic into three waves to differentiate how various opioids have been misused (CDC, 2018a). The first wave in the 1990s occurred when pain...
medication such as OxyContin and Percocet were misused on a widespread level (Meldrum, 2016, Barry et al, 2019). The second wave started in 2010 as users switched to heroin for a cheaper, accessible drug. (Meldrum, 2016).

The current wave of the opioid epidemic is characterized by the prevalence of synthetic opioids, with fentanyl being the most common synthetic opioid misused (Achenbach, 2019; CDC, 2019b). This wave has been deadly because fentanyl is cheap and able to be combined with other opioids (Barry et al, 2019). Synthetic opioid deaths increased 12-fold between 2013 and 2016 (CDC, 2019b).

African Americans have been the hardest hit group during the current wave (Achenbach, 2019; CDC, 2019b). A March 2019 CDC report on opioid death rates stated African Americans had the largest annual opioid percentage increase from 2011-2016 at 141 percent each year on average (CDC, 2019b). Between 2014-2017, the opioid overdose rate for African Americans increased by 94 percent, which was slightly more than double the 45 percent increase for whites (CDC, 2019a). Despite those statistics, research shows the opioid epidemic has been framed as a crisis affecting white individuals living in suburban and rural areas (Bechteler & Kane-Willis, 2017; Jamison, 2018). White opioid users have been framed as victims of pharmaceutical companies that have flooded the market with painkillers (Jamison, 2018).

The Midwest has been one of the regions hit hardest by the opioid epidemic (CDC, 2018b). The CDC reported in 2018 that of the 23 states to see increases in overdose deaths from July 2016 to September 2017, five of the states-Illinois, Indiana, Michigan, Ohio, Wisconsin—were in the Midwest (CDC, 2018b). During that time period, Illinois had the largest opioid death-rate increase at 29.7 % during the timeframe (CDC, 2018b). Also, during the time period,
Wisconsin was found to have had the largest percentage increase in regards to emergency room visits related to opioid overdoses (CDC, 2018b). From 2014-2017, of the eight states where African Americans had higher opioids rates than other groups; six of the states were in the Midwest (Kaiser Family Foundation, 2019).

The purpose of this study is to examine framing of the third wave of the opioid epidemic from a geo-ethnic context. A content analysis will determine if there are differences in opioid epidemic news framing between majority-minority and majority-white cities as well as cities in the Midwest and Southern regions. This study is important because of the need to understand how the opioid epidemic is framed due to the effect it can have on how individuals view the causes and solutions of the opioid epidemic. Health practitioners and politicians benefit by understanding how the epidemic causes and solutions are being communicated to the local community.
CHAPTER 2. LITERATURE REVIEW

Framing

Researchers from various academic disciplines have utilized framing as a theoretical framework to understand how news is presented. Walter Lippmann’s book, *Public Opinion*, is a well-regarded work among scholars due to the influence it has had on multiple academic disciplines. Framing concepts are prevalent throughout the book as Lippmann sought to understand how individuals interpret issues and form opinions. Lippmann (1922) suggests that “the news is not a mirror of social conditions but the report of an aspect that has obtruded itself” (p. 216). He stated “the news is an account of the overt phrases that are interesting” (p. 221). Those sentences serve as examples of how Lippmann (1922) observed there was news content that received more attention than others.

Decades later, researchers in the psychology and sociology disciplines contributed to the formation of framing as a theory. Political communication researchers were among the first in communication field to utilize the framing theory to study how news content could shape public opinion. Framing has been used to examine topics such as public opinion (Zaller, 1992), the Persian Gulf War (Reese & Buckalew, 1995), affirmative action (Gamson & Modigliani, 1987), and political advertising (Shen, 2004).

Goffman’s research on framing from a sociological perspective served as the foundation for numerous framing studies that followed. In his book, *Frame Analysis*, Goffman (1974) used the word frame to refer to the set of expectations that individuals use to make sense of situations.
they encounter. Goffman (1974) used the phrase “schemata of interpretation” to refer to how individuals create meaning from their experiences (p.21). Goffman described individual frames as being similar to musical notes on a scale to express how they varied and changed over time.

Robert Entman’s contributions to framing are notable for the analysis he provided in several studies. His definition of framing is one of the most commonly used definitions to describe the theory. He defined framing as making certain facts more prominent, or salient, than others (Entman, 1993). Entman also stated framing promotes “a particular problem definition, causal interpretation, more evaluation, and/or treatment recommendation” (Entman, 1993, p.53).

Besides studying how the media makes certain aspects of news coverage salient, Entman sought to understand how alternative sides of issues can become invisible (Entman, 1991). Entman examined American news coverage following incidents of the United States and the Soviet Union downing planes with people on board. After conducting a content analysis, Entman (1991) concluded that coverage of the victims of the flight downed by the United States lacked the empathy framing that victims of the flight downed by the Soviet Union received. The news coverage of the United States shooting down an Iran plane was framed to protect United States’ interest abroad and dismiss the negative aspect of what had occurred. This study relates to Gamson’s (1992) study on current issues that concluded individuals acquire knowledge and form opinions through media discourse.

Several researchers have studied sources’ influence on framing. Entman (1993) noted in his research that media frames emerge as journalists emphasize certain sources. Thus, sources have enormous power to shape news stories. In addition, journalists may use sources as framing devices by creating the illusion of factuality or validity (Pan & Kosicki, 1993). Coleman and
Wilkins (2011) stated that research on sourcing patterns typically is a comparison between ordinary people versus elite sources. To analyze sources, Druckman (2001) performed two laboratory experiments. He concluded “framing effects may occur not because elites seek to manipulate citizens, but rather because citizens delegate to credible elites for guidance. In so doing, they choose which frames to follow in a systematic and sensible way” (p.1045).

News framing has been found at different points to create support for war. Reese and Buckalew (1995) analyzed framing of the Persian Gulf War through a content analysis of an Austin, Texas television station and found the station routinely relied on community elites to structure how the news coverage of the war was covered. In regards to the Iraq War, Speer (2017) found that the *New York Times* framing of the war excluded views that were not from military sources or in line with that of military sources in an effort to push support for the war. In a study looking at post-September 11 news coverage, Entman (2004) analyzed the buildup to the coverage of the war that later followed the attack. Entman (2004) found that during the 2002 State of the Union address George W. Bush used the terms “evil” and “war” as a way to shift public opinion toward being in favor of the United States going to war.

Framing research has provided information on how the theory shapes news content. From politics to war coverage to local news, framing influences how individuals make sense of current events. Entman’s (1993) definition of framing will guide the current study’s attempt to understand how news of the opioid epidemic is framed. This study will follow the sociological tradition of conducting a content analysis to examine framing rather than researching framing effects on individuals. The following sections further illustrate how framing research has been applied to a variety of topics.
Researchers have sought to interpret the differences between framing in national and local newspapers. A study exploring immigration framing found that there was little difference between how the issue was framed between national and local newspapers in Canada and the United Kingdom (Lawlor, 2015). In a study examining framing of autism, researchers sought to determine how local and national newspapers differed in the utilization of the following five news frames: attribution of responsibility, conflict, economic consequences, human interest, and morality (Muhamad & Yang, 2017). The results of a quantitative content analysis concluded that national news outlets utilized the attribution of responsibility frame more often than local news outlets while local news outlets utilized the morality frame significantly more than national newspapers.

A 2010 study examined the Jena Six incident that received significant news coverage in 2007 (Holt & Major, 2010). An analysis of local Louisiana papers and national newspapers concluded that local papers utilized a human-interest frame more frequently than national newspapers while national newspapers relied on the morality frame. The researchers concluded that due to it being an issue that was specific to the Jena community, journalists from national publications utilized non-Jena residents/officials as sources for their stories compared to local journalists.

**Health News & Framing**

To make sense of health news, individuals turn to the media to get information (Pan & Meng, 2016; Bardhan, 2001; Maswanya et al., 2000). Besides informing the public, Zhang et al. (2014) suggests framing provides gives insight to public health practitioners and policy makers responsible for finding solutions. The manner in which health news stories are framed have
implications for individual and government/organization action to address the problem (Hawkins & Linvill, 2010).

Iyengar’s (1991) concepts of episodic and thematic framing have been used to analyze health coverage and how responsibility for problems are attributed. Episodic framing focuses on attribution of responsibility at the individual level and thematic framing looks at societal causes. Iyengar (1991) found episodic frames to appear in U.S. media reports more than 80% of the time. Iyengar’s (1991) study has influenced how attributions of responsibility have been studied/determined. In a study analyzing media discourse of heart disease, researchers (Higgins et al, 2006) examined media summaries over a five-year period and discovered that the majority of narratives employed thematic, rather than episodic framing.

Zhang et al. (2016) determined the framing of depression responsibilities influences public opinion on who should be accountable for causing the problem and what actions should be taken to solve the problem. The results indicate the media assigns more causal and problem-solving responsibilities to individuals than to society. In addition, the researchers found the media’s emphasis on personal responsibility for depression diverts public attention away from more difficult discussions of social causes and societal remedies.

HIV/AIDS news coverage is one of the most common public health topics that communication researchers have examined since its origins in the 1980s. At the onset of the epidemic, the media framed the issue as one that primarily affected homosexuals and individuals on the fringe of society (Grmek, 1989; Bardhan, 2001; Cook & Colby, 1991). Due to the initial frames, policy makers were not pressured to move the issue to the top of the agenda until the framing of the issue shifted (Colby & Cook, 1991). News framing has the ability to influence the
focus of policy proposals and who participates in policy processes (Haider-Market & Joslyn, 2001).

Similar to HIV/AIDS news coverage, the issue of obesity has been the topic of media coverage as causes/solutions consistently receive attention during discussions of America’s high obesity rate. Lawrence’s (2004) study examined the question of who is responsible for causing and curing obesity. Evidence indicated that obesity has been reframed over the last two decades as more research has been done. The initial frames of obesity focused on personal behavior and biology as likely causes of obesity before shifting to environmental causation. This study added to health framing researching by introducing the concepts of individualizing news frames and systematic news frames. Individualizing news frames “limit the causes of a problem to particular individuals, often those afflicted with the problem” (p.57). Systemic news frames “broad the focus, assigning responsibility to government, business, and larger social forces” (p.57).

Race & Framing

Various studies have examined how media frames influence the lens through which issues are viewed. When it comes to public health issues such as the opioid epidemic, race has to be taken into consideration because of the fact that it influences perception of an issue and policy support/opposition (Varava, 2016). Entman and Rojocki (2000) found through interviews and surveys that media framing of African Americans led to whites having an ambivalent attitude toward the group. The researchers noted African Americans are overrepresented in coverage of negative aspects of society (crime, poverty) and underrepresented in coverage of positive issues (business success, positive community news). Jenkins (2012) points to the fact African Americans receive negative coverage due to a lack of diversity in many newsrooms. Despite that,
she posits that even if there is some level of diversity, editors who rely on upholding news norms stick to the status quo.

Drugs, Race & Framing

Research has found that news coverage of drug use contains code words for black and white users (Netherland & Hansen, 2016). The terms “rural” and “suburban” are used as indicators for white people and “urban” is an indicator for black and Hispanic people (Netherland & Hansen, 2016). Netherland and Hansen (2016) found that news coverage of the first two waves of the opioid epidemic failed to include significant coverage of individuals in urban environments. The stories that featured urban residents were found to be short in comparison to news stories from suburban and rural residents.

In stories featuring white drug users, drug use by those individuals is often framed as novel and surprising (Netherland, Daniels, & Lyons, 2018; Netherland & Hansen, 2016). In their book, Cracked, Reeves and Campbell (1994) found that compared to images of white people that attract sympathy to the victim, black drug users are more likely to be viewed as menacing and dangerous.

In both past and current drug crises, the media provided dramatic coverage (Alexander, 2010; Orsini, 2017; Shih, 2008). During the crack epidemic of the 1980s, black addicts were depicted as “crack whores,” “crack dealers,” and “crack babies” (Alexander, 2010, p. 5). Researchers conducting a systematic analysis of Intervention, a reality-based show, found White addicts framed as tragic figures deserving of empathy from viewers (Netherland, Daniels, & Lyons, 2018). The researchers stated that on the show, addiction is portrayed as a “misfortune instead of a crime “(Netherland, Daniels, & Lyons, p.342).
During the 1980s, national media outlets reported frequently on powder cocaine and crack cocaine use (Reeves & Campbell, 1994; Alexander, 2010; Sirin, 2011). Powder cocaine was framed as the drug of choice for white users and treatment was framed as the solution for addicts (Reeves & Campbell, 1994). Earlier in the decade, news stories on powder cocaine-related stories featuring white recreational users had sources that were connected to the drug treatment industry (Alexander, 2010). In the second half of the decade when black users were framed as crack addicts, law and order was framed as the solution (Alexander, 2010; Sirin, 2011). Reeves and Campbell (1994) posited that the difference in solution frames is the key culprit in the sentencing disparities between users of the two drugs.

**Opioids & Framing**

In a study analyzing news coverage of the opioid epidemic from 1998 to 2012, researchers concluded the epidemic was primarily framed as a criminal justice issue more frequently than a treatable condition (Barry et al., 2016). The researchers noted that as time passed, the criminal justice framing gradually decreased. As the opioid epidemic has developed, researchers have analyzed the epidemic’s framing in the news. A group of researchers conducted a content analysis of Facebook comments that served as responses to posted news stories of the opioid epidemic in an Ohio newspaper (Russell et al., 2019). The researchers found Awareness of the Opioid Epidemic and Affected Populations, Programs, Policies, and Interventions, Narratives of Addiction, and Crime, Punishment, and Legal Cases to be the four most prevalent frames (Russell et al., 2019).
Geo-Ethnic Framing

This study looks to examine how race and geography influence news framing of the opioid epidemic. Previous research involving the two has examined how communication to create civic engagement occurs among members of ethnic groups within a defined geographic area (Ball-Rokeach, Kim, & Matei, 2001; Kim & Ball-Rokeach, 2006). The communication infrastructure theory (CIT) was developed to examine interpersonal and mediated storytelling systems (Ball-Rokeach, Kim, & Matei, 2001). The basic premise of CIT is that “an individual’s civic engagement is built on connections to a viable neighborhood storytelling network grounded in a conductive neighborhood context” (Kim & Ball-Rokeach, 2006, p.413). The communication infrastructure consists of the storytelling network and the communication action context.

The CIT contains three levels of storytelling. The macro level contains organizations that have dissemination and production resources capable of producing communication that reaches a widespread audience (Kim, Jung, & Ball-Rokeach, 2006). The meso level consists of community organizations such as local newspapers. Micro-level storytelling includes interpersonal networks among individuals in a defined geographic area. An ideal storytelling network occurs when the three levels interact to create civic engagement (Kim & Ball-Rokeach, 2006).

The communication action context refers to the physical, cultural, economic, and social feature of an environment in which individuals reside (Wilkin et al., 2007). Geo-ethnicity is a concept that developed from the CIT as researchers sought to discover how race and geography interact. Geo-ethnicity is defined as “ethnically articulated attitudes and behaviors grounded in a specific temporal and spatial situation” (Kim, Jung, & Ball-Rokeach, 2006, p.424). The concept
consists of two components: being “ethnically or culturally relevant” to an ethnic community and being “geographically bound” to that community (Lin & Song, 2011, p. 367).

Lin and Song (2011) conducted a content analysis to understand how ethnic newspapers in Asian and Latino neighborhoods in Los Angeles told stories. Los Angeles served as the location for many studies related to geo-ethnicity (Lin & Song, 2011; Kim & Ball-Rokeach, 2006; Wilkin et al., 2007) due to the amount of ethnic communities in the city. Lin & Song found that the ethnic newspapers produced stories that reflected the community in which they were based.

In a study examining the framing of a bill in Congress that threatened undocumented immigrants, Grimm and Andsager (2011) found that frames occurred differently based on the location of the newspapers as well as racial composition of the communities where the newspapers are located. The researchers stated that “if certain frames resonate in certain areas and not others, then geography and ethnicity could be important factors in determining how those frames arrived in different newspapers” (p.774).

Since African Americans and Midwestern states have been impacted at a higher rate over the course of the current wave, medical experts and policymakers can benefit from understanding how the opioid epidemic is framed in local newspapers to provide solutions to reach the impacted communities. The following research questions will be answered:

**RQ1:** How does causal attribution framing vary between the two regions?

**RQ2:** How does treatment framing vary between the two regions?

**RQ3:** How does causal attribution framing vary by racial composition?
RQ4: How does treatment framing vary by racial composition?
CHAPTER 3. METHODOLOGY

The present study utilized a content analysis to answer the research questions. A content analysis is “a research technique for making replicable and valid inferences from data” (Krippendorff, 1980, p. 21). The newspapers were selected based on the newspaper’s region and the racial composition of the city where the newspaper is based. The content analysis covered the period from January 2016 through December 2018.

The eight newspapers in the sample were selected using population information from the 2010 Census Bureau. The eight cities have population between 250,000 people and one million people (U.S. Census Bureau, 2010). The previously mentioned figures exclude metropolitan statistical area (MSA) figures. The four Midwest cities and newspapers are Milwaukee (Milwaukee Journal Sentinel), Minneapolis (Star-Tribune), Cleveland (The Plain Dealer), and St. Louis (St. Louis Post-Dispatch). The four Southern cities are Raleigh (The News & Observer), Oklahoma City (The Oklahoman), Louisville (The Courier-Journal) and Atlanta (Atlanta Journal-Constitution). Cleveland, Atlanta, St. Louis, and Milwaukee have majority-minority populations while Minneapolis, Oklahoma City, Raleigh, and Louisville have majority-white populations.

News stories were selected from the Access World News database. The following were used as search terms: fentanyl, opioid epidemic, opioids, opioid crisis, and synthetic opioids. Each of the eight newspapers produced at least 375 results. A systematic sampling procedure was conducted to selected every 10th article. For each newspaper, the number of eligible articles
decreased during the selection process as editorials, crime briefs, letters to the editors, Associated Press articles, and articles not related to the opioid epidemic were excluded.

To inductively identify frames, I compiled a sample of articles from *The Detroit Press* and the *Florida Times-Union* based out of Jacksonville, Florida. *The Detroit Press* is a newspaper in the Midwest region based in a city with a majority-minority population. The *Florida Times-Union* serves an audience in the South and is headquartered in a city with a majority-white population.

Frames for the content analysis were identified using the framework provided by Matthes and Kohring (2008). In their research, the pair sought to measure framing of biotechnology in *The New York Times*. According to the two researchers, “it is often not clear which elements should be present in an article or news story to signify the existence of a frame” (p. 263). The pair suggested that splitting up the frame into separate elements instead of coding the whole frame makes for a more effective way to select frames. In order to identify frames, the pair utilized Entman’s (1993) definition of framing that states frames “promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation” (p.52). They posited that frames consist of different variables systematically grouped together in a specific way, forming a pattern that can be identified across in a sample (Matthes & Kohring, 2008).

I selected causal interpretation and treatment recommendations as the two frame elements utilized as variables in the study. Those two frames were chosen because previous research indicated that causes and solutions are the two prominent topics the media focuses on (Lawrence, 2004). After, reading a sample of newspaper articles from *The Detroit Press* and
Florida Times-Union, six causal frames and eight treatment frames were identified through inductive analysis. The causal frames are as follows:

1. Painkiller addiction
2. Unknowingly taking synthetic opioids
3. Pharmaceutical companies
4. Overprescribing
5. Fentanyl
6. Drug dealers
The treatment frames are as follows:
1. Funding
2. Treatment programs
3. Education
4. Criminalize opioid trafficking
5. Limit/regulate opioid prescriptions
6. Access to naloxone
7. Legislation and policy
8. Addiction prevention meds

The painkiller addiction frame explains that the opioid epidemic has been caused by individuals becoming addicted to prescribed painkillers and moving on to stronger drugs. The unknowingly taking synthetic opioids frame explains that synthetic opioids are being mixed into other drugs with individuals being aware they are mixed into the drug. The pharmaceutical frame consists of paragraphs assigning blame to the companies for the distribution and marketing of opioids. The overprescribing frame states the opioid epidemic has been caused by doctors excessively writing prescriptions. The fentanyl frame blames the potency of the synthetic opioid
for the number of individuals overdosing. The *drug dealers frame* assigns blame to drug dealers for individuals without prescription drugs having access to opioids.

The *funding frame* explains that funding is needed for various initiatives designed to fight the opioid epidemic. The *treatment frame* states that treatment is needed for opioids users and addicts. The *education frame* suggests that educating individuals on the dangers of opioid addiction is an adequate solution. The *criminalize opioid trafficking frame* explains that law enforcement tactics are needed to punish drug dealers. The *limit/regulate frame* lists opioid prescription limits or prescription database monitoring as solutions to the epidemic. The *legislation and policy frame* suggest that laws and policy are needed to prevent opioid abuse. The *access to naloxone frame* explains that naloxone, specifically Narcan, is a solution due to the ability to counteract the effects of an opioid overdose. The *addiction prevention meds frame* explains that buprenorphine should be available as solution on how to prevent opioid addiction.

The descriptive variables consisted of the newspaper, the total number of paragraphs, the number of paragraphs containing frames, date of publication, and word count. The newspaper’s location was coded for being either in the Midwest (2) or South (1). In addition, each newspaper was assigned as a majority-minority city (1) or majority-white city (2). Those two variables were listed as nominal variables.

For the content analysis, the news article served as the unit of analysis. Paragraphs were selected as the sampling unit because “news paragraphs are typically short, with journalistic norms dictating that each one contains a unified idea” (Shah et al., 2002, p. 346). Section headlines and lists separated by lines were not identified as paragraphs. Despite the fact there were two types of frames, paragraphs that contained multiple frames were only assigned in a
mutually exclusive manner to one individual frame. Each time a frame was counted, it was marked on the code sheet. At the conclusion of the analysis, the total number of times each frame appeared was added up and calculated. The codebook that was used is in the Appendix section.

An intercoder reliability test was conducted once the frames were identified. The second coder was a senior student at the university the researcher attends. The researcher provided information about the objectives of the study and reviewed the code sheet with the second coder to familiarize them with what to look for while reading the articles.

Once the coding training concluded, a 25-article sample from The Detroit Press and Florid Times-Union was coded and measured for intercoder reliability using Krippendorff’s alpha. That reliability test was chosen due to the fact the coding involved nominal and nonnominal data and the Krippendorff’s alpha allows both types of data to be tested (Riffe et al., 2005). After the testing was done, all the variables exceeded the .80 acceptable level of agreement.

For the content analysis, the statistical analysis program SPSS was used to analyze the data. An independent samples t-test was used for analysis due to the independent variables, geography and race, being categorical variables and the frames being continuous variables.
CHAPTER 4. RESULTS

The content analysis consisted of eight newspapers that produced a sample of 250 news articles. Overall, there were a total of 5,343 total paragraphs and 612 paragraphs that contained either causal or treatment frames. The breakdown of the frames are provided below.

Table 1. Causal Frames

<table>
<thead>
<tr>
<th>Frame</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fentanyl</td>
<td>90</td>
</tr>
<tr>
<td>Painkiller addiction</td>
<td>75</td>
</tr>
<tr>
<td>Overprescribing</td>
<td>52</td>
</tr>
<tr>
<td>Unknowing took opioids</td>
<td>32</td>
</tr>
<tr>
<td>Pharmaceutical companies</td>
<td>27</td>
</tr>
<tr>
<td>Drug dealers</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>286</td>
</tr>
</tbody>
</table>

Table 2. Treatment frames

<table>
<thead>
<tr>
<th>Frame</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit/regulate opioid prescriptions</td>
<td>84</td>
</tr>
<tr>
<td>Access to naloxone</td>
<td>65</td>
</tr>
<tr>
<td>Funding</td>
<td>42</td>
</tr>
<tr>
<td>Treatment programs</td>
<td>42</td>
</tr>
<tr>
<td>Education</td>
<td>35</td>
</tr>
<tr>
<td>Criminalize</td>
<td>34</td>
</tr>
<tr>
<td>Addiction prevention meds</td>
<td>13</td>
</tr>
<tr>
<td>Legislation and policy</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>326</td>
</tr>
</tbody>
</table>
Table 3. Casual frame distribution by city

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Addiction</td>
<td>12</td>
<td>13</td>
<td>6</td>
<td>11</td>
<td>15</td>
<td>5</td>
<td>8</td>
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<td>Fentanyl</td>
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<td>19</td>
</tr>
<tr>
<td>Drug dealers</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Overprescribing</td>
<td>6</td>
<td>8</td>
<td>5</td>
<td>2</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Pharmaceutical companies</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Unknowingly took opioids</td>
<td>2</td>
<td>8</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>34</td>
<td>42</td>
<td>29</td>
<td>38</td>
<td>40</td>
<td>35</td>
<td>23</td>
<td>45</td>
</tr>
</tbody>
</table>

Table 4. Treatment distribution by city

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding</td>
<td>4</td>
<td>4</td>
<td>14</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Education</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>8</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Treatment programs</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>9</td>
<td>5</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Legislation &amp; Policy</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Limit/Regulate</td>
<td>15</td>
<td>13</td>
<td>6</td>
<td>11</td>
<td>9</td>
<td>8</td>
<td>13</td>
<td>9</td>
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<tr>
<td>Criminalize</td>
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<td>5</td>
<td>5</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Naloxone</td>
<td>6</td>
<td>10</td>
<td>4</td>
<td>9</td>
<td>10</td>
<td>9</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Overdose prevention meds</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>39</td>
<td>39</td>
<td>41</td>
<td>50</td>
<td>45</td>
<td>34</td>
<td>46</td>
<td>38</td>
</tr>
</tbody>
</table>

**RQ1: How does causal framing vary between the two regions?** To find an answer to the research question, an independent samples t-test was done with the geography variable-Midwest and South-and casual attribution frames. The results in Table 5 below indicate there
were no statistically significant relationships involving geography and any of the six causal attribution frames.

Table 5. Geography and causal frames

<table>
<thead>
<tr>
<th>Frame</th>
<th>Geography</th>
<th>Midwest</th>
<th>South</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addiction</td>
<td>p-value: .377</td>
<td>1.30 (.638)</td>
<td>1.44 (.669)</td>
</tr>
<tr>
<td>Unknowingly took synthetic opioids</td>
<td>P-value: .844</td>
<td>1.27 (.458)</td>
<td>1.24 (.437)</td>
</tr>
<tr>
<td>Pharmaceutical companies</td>
<td>p-value: .187</td>
<td>1.43 (.938)</td>
<td>1.92 (.954)</td>
</tr>
<tr>
<td>Overprescribing</td>
<td>p-value: .426</td>
<td>1.33 (.796)</td>
<td>1.52 (.811)</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>p-value: 1.000</td>
<td>1.36 (.645)</td>
<td>1.36 (.609)</td>
</tr>
<tr>
<td>Drug dealers</td>
<td>p-value: .447</td>
<td>1.17 (.408)</td>
<td>1.00 (.000)</td>
</tr>
</tbody>
</table>

Note: Midwest and South columns contain M (SD); p<.05

**RQ2: How does treatment framing vary between the two regions?** An independent samples-test test was done with the geography variable-Midwest and South- and the treatment/remedy frames. The test, as indicated in Table 6, produced a statistically significant relationship between the geography and the limit/regulation frame (p=0.32, t=2.38, df=82). In addition, the relationship between geography and access to naloxone was close to being statistically significant (p=.088, t=1.733, df=63).

Table 6. Geography and treatment frames

<table>
<thead>
<tr>
<th>Frame</th>
<th>Geography</th>
<th>Midwest</th>
<th>South</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding</td>
<td>p-value: .796</td>
<td>1.43 (.836)</td>
<td>1.36 (.842)</td>
</tr>
<tr>
<td>Education</td>
<td>p-value: .823</td>
<td>1.19 (.403)</td>
<td>1.16 (.375)</td>
</tr>
<tr>
<td>Treatment program</td>
<td>p-value: .415</td>
<td>1.17 (.383)</td>
<td>1.29 (.550)</td>
</tr>
</tbody>
</table>

(table cont’d)
RQ3: How does casual attribution framing vary by racial composition? To answer the research question, an independent samples t-test was conducted to find the relationship between race-majority-minority and majority-white- and the casual attribution frames. The results, as indicated in Table 7, show there was no significant relationships between race and the casual attribution frames.

Table 7. Race and causal frames

<table>
<thead>
<tr>
<th>Frame</th>
<th>Race</th>
<th>Majority-Minority</th>
<th>Majority-White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addiction</td>
<td>p-value: .377</td>
<td>1.39 (.655)</td>
<td>1.32 (.653)</td>
</tr>
<tr>
<td>Unknowingly took synthetic opioids</td>
<td>P-value: .844</td>
<td>1.09 (.302)</td>
<td>1.33 (.483)</td>
</tr>
<tr>
<td>Pharmaceutical companies</td>
<td>p-value: .187</td>
<td>1.31 (.855)</td>
<td>2.00 (.961)</td>
</tr>
<tr>
<td>Overprescribing</td>
<td>p-value: .426</td>
<td>1.43 (.926)</td>
<td>1.45 (.723)</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>p-value: 1.00</td>
<td>1.23 (.520)</td>
<td>1.49 (.703)</td>
</tr>
<tr>
<td>Drug dealers</td>
<td>p-value: .447</td>
<td>1.20 (.447)</td>
<td>1.00 (0.00)</td>
</tr>
</tbody>
</table>

Note: Majority-Minority and Majority-White columns contains M (SD); p<.05
**RQ4: How does treatment framing vary by racial composition?** To answer the research question, an independent samples t-test was done to find the relationship between race and the treatment/remedy frames. The results, as shown in Table 8, indicate there was no significant relationship between race and treatment frames.

Table 8. Race and Treatment frames

<table>
<thead>
<tr>
<th>Treatment Frame</th>
<th>Race</th>
<th>Majority-Minority</th>
<th>Majority-White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding</td>
<td>p-value: .770</td>
<td>1.38 (.775)</td>
<td>1.46 (.967)</td>
</tr>
<tr>
<td>Education</td>
<td>p-value: .823</td>
<td>1.16 (.375)</td>
<td>1.19 (.403)</td>
</tr>
<tr>
<td>Treatment programs</td>
<td>p-value: .351</td>
<td>1.17 (.388)</td>
<td>1.32 (.582)</td>
</tr>
<tr>
<td>Legislation &amp; Policy</td>
<td>p-value: *</td>
<td>1.00 (0.00)</td>
<td>1.00 (0.00)</td>
</tr>
<tr>
<td>Limit/Regulate</td>
<td>p-value: .973</td>
<td>1.66 (1.039)</td>
<td>1.65 (.948)</td>
</tr>
<tr>
<td>Criminalize</td>
<td>p-value: .529</td>
<td>1.44 (.512)</td>
<td>1.61 (.979)</td>
</tr>
<tr>
<td>Access to naloxone</td>
<td>p-value: .369</td>
<td>1.28 (.528)</td>
<td>1.42 (.692)</td>
</tr>
<tr>
<td>Access to opioid</td>
<td>p-value: .401</td>
<td>1.33 (.516)</td>
<td>1.71 (.951)</td>
</tr>
</tbody>
</table>

Note: *t* could not be computed for legislation/policy frame because the SD for both groups are 0; Midwest and South columns contain M (SD); *p*<.05
CHAPTER 5. DISCUSSION

The research’s objective was to understand how geography and racial composition influenced framing of the opioid epidemic during a three-year period. This is a worthy objective because individuals obtain health-related information from the media (Pan & Meng, 2016; Bardhan, 2001; Maswanya et al., 2000). Results indicate there was little geo-ethnic influence on framing of the opioid epidemic. The only statistically significant relationship occurred between geography and the limit/regulate treatment frame. The geography and access to naloxone treatment frame was the next closest relationship.

In the sample, the limit/regulate frame (n=84) is the most frequent treatment frame and the second most frequent frame in the sample behind the fentanyl causal frame. Paragraphs that contained the limit/regulate frame were likely to state medical professional need to implement and enforce prescription monitoring to prevent overprescribing. Using Iyengar’s (1991) framework, the limit/regulate treatment frame is classified under thematic framing. That is a notable finding because it indicates there are societal forces responsible for the epidemic. Previous studies consistently concluded the media places more causal and problem solving responsibilities on individuals rather than society (Zhang et al., 2016; Iyengar, 1991; Hawkins & Linvill, 2010). This result is consistent with the research indicating pharmaceutical companies are responsible for the opioid epidemic (Jamison, 2018).
This finding is in contrast to the news coverage of the crack epidemic that featured episodic framing containing negative depictions of victims (Alexander, 2010; Reeves & Campbell, 1994). The contrast in framing between the two epidemics illustrates racial bias in regards to the portrayal of victims. In this study, two treatment frames present the idea of making opioid addiction and addiction prevention medication accessible to the public. During the crack epidemic, law enforcement framing served as the primary treatment frame (Reeves & Campbell, 1994; Alexander, 2010).

In regards to law enforcement, the criminalization frame in the sample also produced noteworthy results. The Midwest and South regions had the same number of paragraphs containing a criminalization frame. In addition, majority-white cities had more paragraphs with a criminalization frame (n=18) than majority-minority cities (n=16). This result is noteworthy due to that fact that criminal justice solutions using target black drug users (Alexander, 2010; Reeves & Campbell, 1994; Sirin, 2011).

Data from the results section indicates that the limit/regulate frame is more prominent in the South compared to the Midwest. This result indicates there are differences among some of the cities in the South. Louisville’s location in north Kentucky puts it in close proximity to the Midwest while Oklahoma City borders several Western states.

The lack of statistically significant relationships could be contributed to homogeneity in the newsrooms. During the crack epidemic of the 1980s, the negative framing toward African American users was partially due to the lack of diversity in the newsrooms (Jenkins, 2012). Based on the studies that have examined the opioid epidemic to this point, the epidemic has been framed in a more sympathetic light (Netherland et al, 2018). With four of the cities having a
majority-minority population, it is likely that due to the lack of diversity in present times as well, those cities will share similar frames as majority-white cities.

The study’s sample consisted of newspaper coverage from 2016-2018. The first wave of the opioid epidemic occurred during the late 1990s when prescription painkillers were abused (Meldrum, 2016, Barry et al, 2019). With the sample taking place during the third wave almost twenty years later, it is worth asking whether the news coverage of the opioid epidemic has become uniform no matter the location and/or racial composition of the city. In addition, it may be likely that the increase in the African American opioid death rate in urban areas such as St. Louis and Milwaukee is likely to have helped shift the narrative from the opioid epidemic being viewed as a predominantly white and rural issue.

Iyengar’s research on episodic and thematic framing (1991) has been cited in various health communication studies to understand whether individuals (episodic framing) or societal forces (thematic framing) are responsible for the issue at hand. It is important to note that in his research of cancer-related topics, Iyengar found that local news outlet commonly used episodic framing due to the fact they do not have the resources that national news outlets had at their disposal to frequently produce in-depth news. That suggests that local media would be likely to frame content in a similar way. After review, it is possible the frames did not differ because of the fact that none of the newspapers included in the sample are circulated nationally and avoid having to publish stories to reach readers outside the area.

Overall, the results conclude there is little geo-ethnic influence on framing during the current wave of the opioid epidemic. This outcomes leads to the conclusion that there are other factors present that have limited the effects of race and geography on framing.
CHAPTER 6. LIMITATIONS/FUTURE STUDY

For the study, geo-ethnicity was the framework chosen to examine how geography and race influence framing. Immigration has served as the primary geo-ethnic research topic with emphasis being placed on the immigrant community in the Los Angeles area. In addition, local ethnic media has been the primary method of studying geo-ethnicity. For that reason, there was little framework for a study utilizing geo-ethnicity for a different research topic involving newspapers in multiple cities across multiple states. While that is a limitation, it also served as opportunity to gauge how geo-ethnicity could be applied to other topics.

Future geo-ethnic research on the opioid epidemic should take place in a city that has various ethnic communities. Besides Los Angeles and New York City, Houston would be a good choice due to it being the most diverse city in the United States (Mejia, 2017). The current study differed from previous geo-ethnic studies by using race instead of ethnicity as an independent variable in addition to analyzing multiple areas instead of one diverse area.

The present study focused on the opioid epidemic, which encompasses numerous subtopics. Future research should focus on a single topic within the epidemic. I suggest that researchers look at safe injection sites, which have increasingly become mentioned as a solution to opioid addiction. Safe injections sites would be a worthy topic because it is a topic where
individuals would either support or oppose the idea. The opioid epidemic topic in this study is informational and doesn’t contain and pro/anti frames.

Utilizing geo-ethnicity as a framework to guide research was an opportunity to take an alternate approach to analyzing framing. However, the results were not what I anticipated due to the lack of statistically significant relationships. One potential limitation was the fact an independent samples t-test for analysis due to the dependent variables consisting of continuous variables. A future study could possibly produce more statistically significant results by having categorical variables as dependent variables. For that reason, I suggest a deductive approach to identifying frames instead of an inductive approach. In regards to a deductive approach, Neuman and his colleagues (1992) identified five frames that are prevalent in news coverage across multiple topics. Those frames are conflict, economic consequences, human impact, and morality. The five frames apply to opioid epidemic news coverage.
REFERENCES


Druckman, J. The Implications of Framing Effects For Citizen Competence.


Johnson, J., & Wagner, J. (2017, March 26). Trump declares the opioid crisis a public health


APPENDIX Coding Sheet

News source: ___________________________      Publication date: _______ (xx/xx/xx)
Word count: ______
Geographic location of newspaper: _________  1-South, 2-Midwest
Race/Ethnicity: ___________   1-majority-minority, 2-majority-white
# of paragraphs in story: _____                                    # of paragraphs that contain frames: _____

Framing: Make tally marks to indicate occurrences of frames. No paragraph can have
more than one frame.

Causal attribution frame
Addiction ____
Overprescribing ____
Pharmaceutical companies ____
Drug dealers ____
Fentanyl ____
Unknowingly taking drugs containing synthetic opioids ____

Treatment/remedy frame
Funding ____
Education ____
Criminalize opioid trafficking ____
Limit/regulate opioid prescriptions ____
Treatment programs ____
Legislation and policy ____
Make naloxone accessible ____  Make methodone and/or buprenorphine accessible ____
Vita

Nicholas Robert, a native of Baton Rouge, Louisiana, is a graduate student at Louisiana State University’s Manship School of Mass Communication. He intends to graduate in December 2019. He graduated from Southeastern Louisiana University in 2012 with a bachelor’s degree in mass communication and journalism.