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## Characterizing Flavors Of Little Cigars And Cigarillos In YouTube Videos

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## ABSTRACT

### Characterizing Flavors Of Little Cigars And Cigarillos In YouTube Videos

By

Halley Louise Myers

DATE April 17, 2017

#### **Abstract**

**Introduction:** The use of little cigars and cigarillos (LCCs) is rising but a few educational efforts focus on preventing their use (Sterling et al., 2016) (Richardson et al., 2013). Marketing and advertising of LCCs have been targeted toward individuals who are of a low socioeconomic status and African American (Cantrell et al., 2013). Individual users can upload videos on YouTube featuring little cigars, and cigarillos. The flavoring of little cigars and cigarillos is a draw to adolescences and young adults to start smoking (Nyman et al. 2016). Characterizing flavors of LCCs YouTube videos needs to be examined because it may influence adolescents to smoke LCCs.

**Aim:** To examine the frequency of characterizing flavors little cigar and cigarillo in YouTube videos.

**Methods:** Data from YouTube were analyzed for this study. We used Google Insights which shows the most frequently searched terms, to examine what should be searched. “Cigarillo” and “Black and Mild” were found to be the most common as of January 22, 2017.

**Results:** Of the 80 videos collected a total of 54 videos were analyzed. Half (50%,  $n=27$ ) of the videos contained a mention of characterizing flavors. On average, videos that contained both characterizing flavors were viewed 249,753 times.

**Discussion:** Half of the videos contained a description of characterizing flavors. However, the videos with characterizing flavors were viewed 249,753 times on average, which may entice

youths to begin smoking tobacco products. Understanding LCC content on YouTube may have implications for developing health messages to reduce the likelihood that adolescents will begin smoking LCCs.

CHARACTERIZING FLAVORS OF LITTLE CIGARS AND CIGARILLOS IN YOUTUBE  
VIDEOS

by

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A Thesis Submitted to the Graduate Faculty  
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APPROVAL PAGE

Characterizing Flavors Of Little Cigars And Cigarillos In YouTube Videos

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## Author's Statement Page

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Halley Myers  
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## **Chapter 1**

### **Introduction**

Reducing cigarette smoking has been championed as a large public health victory. However, there are other tobacco products that contain the same carcinogenic agents as cigarettes (CDC,2009). Little cigars and cigarillos (LCCs) are similar in size to a cigarette and may or may not include a filter (CDC, 2016). LCCs can be smoked as a tobacco product but may be used to smoke marijuana commonly called “blunts” (Truth Initiative, 2016). LCCs are often flavored which make them more inviting for adolescents to smoke (Agaku et al., 2013). Flavored LCCs commonly carry less of a harm perception among youth compared to cigarettes (Sterling et al., 2016).

Social media is popular among adolescents. YouTube is a video sharing platform which is the second most commonly used website in the United States (Anderson, 2014). Individuals, tobacco shops, and tobacco companies use YouTube to present and possibly promote LCCs. Celebrities are often used by tobacco companies to endorse LCCs. Adolescents are more likely to use tobacco products after seeing positive images of tobacco use (Yoo, Yang, & Choo, 2016). Social media often are used to share health messages, which may influence the likelihood of tobacco use. It is important to assess LCC messages that are found on YouTube to possibly prevent adolescents from gaining favorable views of smoking LCCs.

Characterizing flavors of tobacco products are associated with adolescent tobacco use. A characterizing flavor is a natural or artificial flavoring that is added such as, alcohol, vanilla, or fruit flavors (FSPTCA, 2009). Adolescents reported that flavored LCCs are less harmful than cigarettes (Sterling et al., 2016). In 2009, the Family Smoking Prevention and Tobacco Control Act (FSPTCA) was passed by Congress and signed by President Obama (Prevention.nih.gov, 2017). The goal of FSPTCA was to protect families and children from the health dangers of

tobacco use (Prevention.nih.gov, 2017). The FSPTCA banned manufacturers from producing and banned point of sale of cigarettes with characterizing flavors which include fruit and candy flavors (Prevention.nih.gov, 2017). LCCs are not included in the FSPTCA ban of characterizing flavors (2017).

The purpose of this thesis is to understand what types of messages about LCC flavoring are common in popular in YouTube videos. This research may act as formative research in health communications campaigns that seek to combat positive LCC messaging targeted at youth.

## **CHAPTER 2 REVIEW OF THE LITERATURE**

### **Profile of Little Cigars and Cigarillos**

Little cigars and cigarillos are often referred to as LCCs. LCCs are like cigars in the way that they consist of rolled tobacco and are wrapped in a tobacco leaf (National Cancer Institute, 1998). They differ from cigarettes because cigarettes are rolled in paper or another type of wrapper that does not contain tobacco (CDC, 2016). Cigarillos are three to four inches long and commonly do not include a filter (CDC, 2016). Little cigars are roughly the same size as a cigarette and usually include filters (CDC, 2016).

LCCs differ from large cigars. Large cigars usually contain half an ounce or more of aged and fermented tobacco which is the same amount of tobacco as in a pack of cigarettes (CDC, 2016). Cigarillos contain about three grams of tobacco (National Cancer Institute, 2017). Little cigars contain around one gram of tobacco (National Cancer Institute, 2017).

### **Health Effects**

LCC and cigar use has been linked to many adverse health outcomes. Cigar smokers are at a greater risk for oral, lung, esophageal, and larynx cancers compared to nonsmokers (National Cancer Institute, 1998). Cigar smokers who smoke five or more cigars per day are at about the

same risk for lung cancer as those who smoke a pack of cigarettes per day (National Cancer Institute, 1998). Inhalation of tobacco smoke may increase a person's risk of developing coronary heart disease ("Health Risks of Smoking Tobacco," 2017). Cigar smokers who deeply inhale have higher rates of coronary heart disease and chronic obstructive pulmonary disease (National Cancer Institute, 1998).

Cigar smokers are exposed to different levels of chemicals than cigarette smokers (Symm, Morgan, Blackshear, and Tinsley, 2005). Cigar smoke contains higher levels of Tobacco-specific *N*-nitrosamines (TSNA) compared to cigarettes (Symm, Morgan, Blackshear, and Tinsley, 2005). TSNA has been linked to pancreatic cancer (Alguacil, 2004). Cigars also have a higher concentration of nitrogen compounds, nitrogen oxides, ammonia, carbon monoxides, and tar compared to cigarettes (Symm, Morgan, Blackshear, and Tinsley, 2005). Cigarillo smokers were exposed to more carbon monoxide than those who smoked cigarettes (Koseawski, 2015). LCCs have more nicotine than cigarettes resulting in an increased likelihood of nicotine addiction and dependence when smoked (Symm, Morgan, Blackshear, and Tinsley, 2005).

### **Blunt Use**

LCCs are sometimes used as a marijuana delivery system. The tobacco is removed from the LCC and replaced with marijuana and smoked (Koopman Gonzalez, Cofie, and Trapl, 2015). Sometimes, the inner paper in the LCC is removed when making the LCC into a blunt (Koopman Gonzalez, Cofie, and Trapl, 2015). Blunts can be made from plastic tipped and non-tipped cigarillos (Koopman Gonzalez, Cofie, and Trapl, 2015). LCCs with characterizing flavors may also be used as a blunt. Young adults either blend the flavored tobacco in with marijuana or replace the tobacco with marijuana (Sterling et. al, 2016).

## **Risk Perceptions of LCC Use**

Adolescents may have different risk perceptions of smoking LCCs versus smoking cigarettes. Malone, Yerger, and Pearson found that youths believed smoking cigars were a harmful behavior, but some believed that LCCs were less harmful than cigarettes because they were less processed and more natural (2011). Some youths believed that nicotine is an additive and does not naturally occur in tobacco products, especially cigars (Malone, Yerger, and Pearson, 2011). Hispanic young adults reported being able to quit smoking LCCs quickly while not being able to cease smoking cigarettes (Sterling et. al, 2016). Some white male adolescents reported that since there are fewer LCCs in a pack versus cigarettes people were less likely to smoke a whole pack (Sterling et. al, 2016). Cigars are not commonly inhaled (National Cancer Institute, 1998). The lack of inhalation may make LCCs seem less harmful to youth as well (Sterling et. al, 2016). Across all races, young adults reported that LCCs with characterizing flavors were less harmful than those without (Sterling et. al, 2016). In contrast, some young adults thought that LCCs are more harmful than cigarettes because of the greater amount of tobacco contained in them (Sterling et. al, 2016).

There is a lower risk perception in smoking marijuana than smoking tobacco products (Koopman Gonzalez, Cofie, and Trapl, 2015). Perceptions of harm from using marijuana versus tobacco may be a factor in deciding to smoke an LCC as a blunt instead of its original form (Cohn and Johnson, 2016). Malone, Yerger, and Pearson found that youths thought that marijuana was either less harmful than tobacco or not harmful (2001). Youths noted that marijuana was natural and did not cause negative effects such as coughing (Malone, Yerger, and Peatson, 2001). Young adults have also attributed less harm with a blunt because they believed

that the tobacco inside of the LCC was carcinogenic (Koopman Gonzalez, Cofie, and Trapl, 2015).

Some of the misconceptions about the harmfulness of cigars may be due to the lack of education on cigars. When asked, youths reported not receiving any cigar-related education in school and seeing little messaging on television about the harmful health effects of cigars (Malone, Yerger, and Pearson, 2011). Some young adult African-Americans felt like some anti-smoking education was focused on white adults (Malone, Yerger, and Pearson, 2011). Overall, young African Americans may be missing out on health education messages because they are not being presented or the messages are not racially inclusive.

### **LCC Characterizing Flavors**

LCCs may have characterizing flavors (Kostyigina, Glants, and Ling, 2104). The U.S. Food and Drug Administration considers characterizing flavors to be “an artificial or natural flavor (other than tobacco or menthol) or a herb or spice strawberry, grape, orange, clove, cinnamon, pineapple, vanilla, coconut, licorice, coco, chocolate, cherry, or coffee” (FSPTCA, 2009). Natural and artificial flavors can include alcohol, vegetable, meat, or bark flavoring that serves as a flavoring function rather than nutritional (“CFR - Code of Federal Regulations Title 21”, 2016). Characterizing flavors can be in the tobacco, filter, or paper of a tobacco product (FSPTCA, 2009).

Characterizing flavors are added to LCCs to mask the flavor of the tobacco (Resnik, 1970). Little cigars have been flavored to mask harsh tobacco taste since 1970 (Resnik, 1970). The first modern day LCC was created by the Phillip Morris Tobacco Company and included cherry and menthol flavors to minimize the harsh tobacco taste (Resnick, 1970). Flavors were later put in the filters and plastic tips of LCCs (Kostyigina, Glants, and Ling, 2104). From 2000

to 2014 tobacco companies increased the use of candy and fruit flavors to make smoking more pleasurable (Kostyigina, Glants, and Ling, 2104). When participants were asked what the most important reason for smoking LCCs was, the most popular answer was that they came in flavors they enjoyed (Nyman et al. 2016).

### **Family Smoking Prevention and Tobacco Control Act**

In 2009, the Family Smoking Prevention and Tobacco Control Act (FSPTCA) banned the use of characterizing flavors including fruit, candy, and alcohol flavors in cigarettes. However, under this act the United States Food and Drug Administration currently allows LCCs to include characterizing flavors (2009). In hopes of restricting youth access to LCCs, the FSPTCA requires retailers to check photo identification for everyone under twenty-seven attempting to buy cigars (2009). Cigars and LCCs are no longer allowed in vending machines in stores where patrons under the age of eighteen are allowed (FSPTCA, 2009). The Internet and other non-face-to-face purchase of tobacco products (including LCCs) must establish age verification (FSPTCA, 2009). Lastly, by May 10, 2018, there will be six rotating warning labels on all cigar packages and advertisements (FSPTCA, 2009).

Though the federal government has not prohibited characterizing flavors of LCCs, some states and localities have banned sales. Maine has banned the sale of LCCs in characterizing flavors (Maine, 2016). Providence, Rhode Island, New York, New York, Chicago, Illinois, Minneapolis and St. Paul, Minnesota, and Boston, Massachusetts prohibit the sale of tobacco with characterizing flavors (Truth Initiative, 2016).

### **Prevalence of LCC Use**

Flavored LCCS use is prevalent among adolescents and young adults. The prevalence of only using LCCs among young adults is 21.5% (Richardson et al., 2013). Among middle and

high school students an estimated 910,000 students used flavored LLCs or large cigars in 2014 (CDC, 2015). Of middle and high school tobacco users 63.5% used flavored LLCs or large cigars (CDC, 2015).

### **Demographics of LCC Use**

In 2012, the Surgeon General reported that 20% of high school males smoked cigars including LLCs. Little cigar use is more common among high school and middle school boys than girls, with the likelihood of initiation of use increasing with each grade (Agaku et al., 2013). Adolescents are also more likely to smoke flavored LLCs instead of traditional tobacco LLCs. The average age of first cigar smoke was 20.5 years of age (SAMSHA, 2010). Eighteen to twenty-five-year-olds had a greater chance of using a cigar in the past month than adults or younger children (SAMSHA, 2010). High school students were more likely to be curious about cigars than middle school students (Portnoy, 2012). African-American adolescents were the most likely to use LLCs compared to any other races (Nyman et. al, 2016). Males reported being more curious about cigars and using them more often than females (Portnoy,2012). LLCs were more prevalent in low socioeconomic African American neighborhoods than any other sociodemographic category (Cantrell et al. ,2013).

### **Advertisements**

Adolescents are exposed to a variety of LCC advertisements. From 2000 to 2012, adolescents reported seeing tobacco advertising in print media more than in-store advertisements (Agaku et al., 2013). Research shows that adolescent exposure to Internet advertisements promoting tobacco products increased from 22.3% in 2000 to 43% in 2012 (Agaku et al., 2013). Adolescents who were exposed to in-store and television tobacco company advertisements reported being more curious about cigars than those not exposed to any cigar advertising

(Portnoy, 2012). Exposure to internet advertising is associated with the curiosity of cigars (Portnoy, 2012). Evidence suggests that tobacco companies may use popular social media websites to target adolescences and advertise tobacco products (Freeman and Chapman, 2010).

LCC advertisements are often targeted to low-income African Americans. Storefront advertisements are more widespread among low-income African American communities with a large population of young adults than other neighborhoods (Cantrell,2013). LCCs are often sold at a lower price in African American communities with a high density of young adults than compared to any other demographic of the neighborhood (Cantrell,2013). Selling LCCs at an economical price make cigars more appealing to a price conscious consumer (Rice, 2006).

### **Celebrity Endorsements**

Celebrities, especially hip-hop artists have endorsed LCCs. For example, in 2012, Snoop Dogg, now known as Snoop Lion (a popular hip-hop musician) launched his brand of cigarillos at the Coachella music festival (RollingStone, 2012). He named them Executive Branch Cigarillos and they were sold for \$0.99 for two (RollingStone, 2012). Snoop Dogg used Facebook, Twitter, Instagram and YouTube to promote the Executive Branch Cigarillos (Richardson et al., 2013). The YouTube video depicted marijuana, in the beginning, to cross promote it with blunt usage. Malone, Yerger, and Pearson reported that youths said that they watched celebrities smoking on television and thought that they should also smoke to look cool (2001).

The practice of tobacco companies using concerts and music to promote their product has been going on for many years. In 1975 Kool cigarettes were promoted with a Jazz festival and in 2004 they were used to sponsor a DJ competition named Kool Mix (Hafez, 2017). Music has a wide reach and individuals may identify a certain type of music or artist with the tobacco product

or brand (Hafez, 2017). Currently, tobacco companies also use concerts with celebrities to promote their products. For example, Swisher Sweets a popular LCC brand, hosts “Pack Nights” that showcase large cities’ local music artists (Swisher, 2015). According to the Swisher Sweets, fans can support emerging artists, sample LCCs, receive promotional items, and drink cocktails that are inspired by Swisher Sweets tobacco products (Swisher, 2015).

## **YouTube**

YouTube is a popular video-sharing social media website. Users can upload their content or watch others' videos. In 2014, YouTube was the second most popular social media website behind Facebook (Anderson, 2014).). YouTube reports that their website has over a billion users (YouTube, 2017). Eighty-two percent of YouTube users were between eighteen and twenty-nine years old (Anderson, 2014).). African-Americans and Hispanics are more likely to use YouTube than Whites (Anderson, 2014).

YouTube is easily accessed on mobile devices. The Pew Research Center reported in 2014, 73% of teens have access to a smartphone. Over half of all videos are watched on a mobile device such as a smartphone (YouTube.com, 2017). YouTube reports it reaches more eighteen to forty-nine-year-olds on their mobile app than any United States cable network (2017).

YouTube does not allow paid advertising of tobacco products (“Community Guidelines-YouTube”, 2017). Advertisements are embedded in the YouTube videos (“YouTube Advertising-Online Video Advertising Campaigns-YouTube”, 2017). However, private viewers or online tobacco shops reviewing and promoting tobacco usage are not restricted under this definition.

## **Likelihood of Tobacco Use After Social Media Exposure**

Little research has been done about likelihood to use tobacco products after exposure to pro-tobacco content on social media. Exposure to smoking, via social media, strongly predicted later tobacco smoking in eighteen to twenty-four-year-olds (Depue et al., 2015). Exposure to depictions of smoking through social media was a stronger predictor of subsequent smoking than exposure to smoking through television (Depue et al., 2015). Yoo et al. found college students who were exposed to messages promoting tobaccos use were more likely to use tobacco (2016). College students who were exposed to social media messages promoting tobacco use were also more likely to believe that their peers were smoking (Yoo et al., 2016).

### *Research Questions*

Based on the review of the literature, the thesis will answer the following research questions:

Research Question 1: How often are characterizing flavors depicted in popular LCC YouTube videos?

Research Question 2: What if any are the differences between YouTube videos with and without characterizing flavors and the prevalence of smoking, blunt use, the number of views, and the number of comments?

## **CHAPTER 3 METHODS AND PROCEDURES**

### **Data Collection**

The sampling methodology performed followed previous social media content sampling methodology conducted by Broomberg et al. (2011) and Richardson and Vallone (2012). First, the most popular search terms for LCCs were identified through web traffic searching for LCCs using Google Trends. Google Trends examines how often a search term is entered on YouTube (Thinkwithgoogle.com, 2017). The search terms were selected because they represented LCC

products and popular LCC search terms on YouTube. The search terms “Cigarillo” and “Black and Mild” were found to be the most popular according to the Google Trends analysis. Searches for “Cigarillo” and “Black and Mild” were conducted (1) by relevance and (2) by view count on YouTube.

The top twenty videos of each search term in relevance and view count were collected. Previous research has suggested that the majority of people do not go past the first page, which contains twenty videos (Jansen and Sprink, 2006). The default search on YouTube is by relevance, which was used. Another search using view count was conducted. Using relevance and view count is supported and used in Bromberg et al. (2011) and Richardson and Vallone (2012). The relevance and view count filters capture a wide range of videos that may be viewed (Richardson and Vallone,2012). Videos not in English, videos that did not feature LCCs for smoking, and videos that contained large cigars, cigarettes, and other tobacco products were excluded. YouTube videos were collected and downloaded on January 22, 2017.

A content analysis was completed. The content analysis examined visually showing the package for characterizing flavors, verbal mention of characterizing flavors, the number of views, the number of comments, and depiction of blunt usage. All variables were coded with either a one or a zero. One signified the presence of the item being examined while zero signified the absence of the item being examined. The content analysis was completed in Excel.

## **Variables**

### ***Visual characterizing flavor.***

Package with characterizing flavors shown was defined as a readable label either on the LCC wrapper or package. For example, if there was an LCC package with an Apple label, it would have been coded for presences of a package with flavor shown.

***Verbal characterizing flavor.***

The criteria for flavors verbally mentioned included stating the flavor of the product on the package and mentioning the taste or smell of the product. Types of cigarillos and Black and Milds' such as blue, mild, or sweet were not considered to be flavors.

***Smoking.***

The criteria for actively smoking was a lit LCC being brought to someone's mouth.

***Number of views.***

The number of views was collected from YouTube on January 22, 2017. The number of total views was recorded.

***Number of comments.***

The number of comments were collected from YouTube on January 22, 2017. The total number of comments were recorded in the Excel document.

***Blunt use.***

Blunt use was defined as the act of taking the tobacco out of the LCC and inserting marijuana into it to smoke. Videos demonstrating the blunt making process were considered as having blunt use.

**Sample**

The initial sample consisted of eighty videos. The search terms were combined. Once cleaned to fit the criteria, the final sample consisted of fifty-four ( $N=54$ ) videos. Reasons for removing the videos are provided in Table 1 in the appendix.

## CHAPTER 4 RESULTS

Fifty-four unique videos were viewed and analyzed. The Cigarillo and Black and Mild videos were combined to examine the total videos collected. Reasons for removing videos from the sample are presented in Table 1.

### **Frequency of Characterizing Flavors in YouTube Videos**

Videos were analyzed to understand the prevalence of characterizing flavors. Half of the videos (50%,  $n=27$ ) had characterizing flavor present in some form. Three videos (5.6%,  $n=3$ ) depicted characterizing flavor only visually, four videos (7.4%,  $n=4$ ) only verbally, and 20 videos (37%) had both a visual and verbal representation of characterizing flavor. More information can be found in Table 2.

### **Differences in Videos with Characterizing Flavors and No Characterizing Flavors**

#### ***Smoking.***

The frequency of smoking in videos containing characterizing flavors was analyzed. Information about smoking in the videos that contained characterizing flavors can be found in Table 3. Of the videos that contained co-occurring characterizing flavors slightly less than a third (30.6%,  $n=11$ ), contained smoking. Notably, when combined videos with either a verbal, visual, or co-occurring mention of characterizing flavoring were combined, smoking was equally as frequent (50%,  $n=18$ ) than in the without characterizing flavors (50%,  $n=18$ ).

#### ***Blunt use.***

Videos containing characterizing flavors and blunt use were examined. Table 4 contains data on blunt use in videos. Of the videos containing blunt use, the majority (62.5%,  $n=8$ ) feature

no characterizing flavors. Interestingly, a quarter of the videos that contained verbal and visual characterizing flavors features include blunt use.

***View Count.***

The number of views of videos with characterizing flavors were compared to videos without characterizing flavors. Table 5 presents information on the number of views with characterizing flavors, without characterizing flavors, characterizing flavors only verbally mentioned, and characterizing flavors only on the package. In total, videos with characterizing flavors were viewed about twice as much as videos without characterizing flavors. Videos containing either only characterizing flavors on the package or verbally mentioning the characterizing flavor did not have as many views as videos with no characterizing flavors or characterizing flavors shown on a package and verbally mentioned.

***Comment count.***

The number of comments on videos with characterizing flavors were compared to videos without characterizing flavors. Table 5 has information on the number of comments in videos with characterizing flavors, without characterizing flavors, characterizing flavors only verbally mentioned, and characterizing flavors only on the package. Videos with characterizing flavors were commented on slightly less than half as much as those without characterizing flavors. Videos with only one mention (verbal or visual) of a characterizing flavor did not have as many comments as those without or with both mentions of characterizing flavors.

**CHAPTER 5  
DISCUSSION & CONCLUSIONS**

The goal of the study was to examine the prevalence of characterizing flavors among LCC YouTube videos. The study also aimed to observe the differences between videos with and without characterizing flavors regarding smoking, blunt use, the number of views, and the

number of comments. Videos without any characterizing flavors were found the most frequently with less than half of the videos contained characterizing flavors. Videos with characterizing flavors featured smoking equally as frequently than videos without characterizing flavors. Videos containing blunt use feature characterizing flavors less frequently than videos without characterizing flavors. When videos that contained a verbal mentioning of characterizing flavors and videos with co-occurring characterizing flavors were combined smoking was more prevalent among videos with characterizing flavors than without. Videos with characterizing flavors verbally mentioned and visually featured on a package on average had more views per videos than videos without characterizing flavors. Videos with both features of characterizing flavors had slightly fewer comments on average than videos with no characterizing flavor.

Half of the videos of the videos contained a mention of characterizing flavors (50%,  $n=27$ ). Currently, Richardson and Vallone have published the only research article examining the prevalence of characterizing flavors in LCCs among YouTube videos (2012). Richardson and Vallone found LCC candy flavors to be a common theme among YouTube videos (2012). Young adults report smoking cigars with characterizing flavors more often than smoking traditional flavored cigars (Corey et al., 2014). Adolescents have reported characterizing flavors are the main reason they smoke LCCs (Nyman et al. 2016). Some young adults believed that LCCs with characterizing flavors were less harmful to smoke (Sterling et al., 2016). Currently, YouTube videos do not seem to be representative of the prevalence of smoking LCCs with characterizing flavors among adolescents.

Individuals who may be likely to start smoking LCCS may be being exposed to this content through YouTube. On average, videos that contained both characterizing flavors were viewed 249,753 times. This may be important because adolescents reported having a higher rate

of smoking LCC with characterizing flavors. The view count of the videos with characterizing flavors is also notable because Young adults are more likely to smoke cigarettes after being exposed to them on social media (Yoo et. al, 2016). With YouTube being the second most popular social media site with a large percentage of users 18-49 years old and African American and Latino it reaches a large audience of those who have higher rates of smoking LCCs (Anderson, 2014).

The study has several limitations. First, the variables were limited imposed by the researcher. Further variables could have been studied such as promotional content and the demographics of the individuals in the videos. Secondly, the study did not focus on the perceptions and understanding of the audience which would be important in examining if being exposed to the YouTube videos was related to subsequent smoking.

Future studies should delve further into social media outlets such as YouTube to better understand LCC content. YouTube is an easily accessible platform that may be encouraging adolescents to smoke or providing misinformation about the health effects of LCCs. Through learning more and monitoring what messages are popular and available on YouTube, public health communications can counter those positive LCC messages. With the increase in social media use and exposure, more needs to be understood about LCC messages which may lead to increased tobacco use among youths.

Although this study has limitations, it also adds to the literature in the field. There are few studies about LCC YouTube videos. The others have examined if the LCC videos were promotional or not. This study adds the important aspect of flavoring to the literature. This is important because the flavoring is thought to be attractive to youth which acts may act as an incentive to smoke LCCS.

In conclusion, less than half of the videos contained LCCs with characterizing flavors. YouTube videos containing visual and verbal mentioning of characterizing flavors were viewed more on average than videos without characterizing flavors. Videos without characterizing flavor had more comments and more blunt use. When combined, videos that included one mention of a characterizing flavor and both characterizing flavors featured smoking more often than videos without characterizing flavors. The findings can be used in health communications to inform anti-tobacco messaging on YouTube through possibly countering mistruths about characterizing flavors among LCCs regarding risk perceptions and inform viewers about potential harms related to smoking LCCs.

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## Appendix

### I. Tables

**Table 1: Sample**

	Relevance	View Count	Duplicates	Other	Total
Total	40	40	11	15*	54

\* Other Column: 7 were not in English, 1 contained a large cigar, and 6 videos did not feature LCCs as smoking devices, and 1 video was excluded because it did not feature a LCC

**Table 2: Characterizing Flavors Found in LCC YouTube Videos**

Characterizing Flavors Features	Combined % (N)
Any Characterizing Flavor	50% (27)
Characterizing Flavor Visual Only	5.6% (3)
Characterizing Flavor Verbal Only	7.4 % (4)
Characterizing Flavor Both	37% (20)
No Characterizing Flavor	50% (27)

**Table 3: Themes found in LCC YouTube Videos**

Themes	Cigarillo % (N)	Black and Mild % (N)	Combined % (N)
Package with Flavor Shown	45.5 (10)	31.3 (10)	37 (20)
Flavor Verbally Mentioned	54.5 (12)	37.5 (12)	44.4 (24)
Smoking	63.6 (14)	71.9 (23)	68.5 (37)
Blunt Use	31.8 (7)	3.1 (1)	14.8 (8)

\* When relevance and view count are combined.

**Table 4: Percentage of Categories of Videos Featuring Characterizing Flavoring**

<i>Video Features</i>	Any Characterizing Flavor % (N)	Visual Characterizing Flavor % (N)	Verbal Characterizing Flavor % (N)	Both Features of Characterizing Flavor % (N)	No Characterizing Flavor Features % (N)	Total % (N)
<i>Smoking</i>	51.3% (18)	0% (0)	18.9% (7)	32.4% (11)	48.7% (18)	100% (3)
<i>Blunt Use</i>	37.5 (3)	0% (0)	12.5% (1)	25% (2)	62.5% (5)	100% (8)

\*Of videos that contain smoking and blunt use.

**Table 5: Average Video Comments and View Counts Per Characterizing Flavor Feature**

Characterizing Flavor Feature	Average Number Of Views	Average Number Of Comments
Any Characterizing Flavor	338,059	368
Verbal and Visual	249,753	133
Verbal Only	49,957	198
Visual Only	38,349	37
No Characterizing Flavors	97,774	137

## II. Coding Manual

### Coding Manual for Flavored YouTube LCC Thesis

#### Thesis Description:

The purpose of this thesis is to understand the flavoring featured in little cigar and cigarillo (LCC) among YouTube videos. While the primary purpose of the study is to examine flavoring among YouTube videos, Surgeon General’s warning labels, blunt usage, the physical act of smoking, the number of views, and the number of comments were examined. This manual will serve as a guide for the coding and data collection portion of the thesis.

#### Introduction:

## **Study Methodology:**

Google Insights was used to determine the most popular search terms on YouTube. “Cigarillo” and “Black and Mild” were found to be the most popular YouTube search terms in the past year. YouTube videos were searched for using the relevance which is the default setting and view count which is an established method used by Bromberg et al. (2011) and Richardson and Vallone (2012) in content analysis among YouTube videos. The top twenty by each search term in relevance and view count were collect as supported by James and Spink (2006) because most individuals do not go past the first page which contains twenty videos.

A total of eighty videos were collected on January 22, 2017. Links were collected but not downloaded to be compliant with YouTube’s Terms of Services. Videos were kept and labeled in separate categories based on the search terms and relevance and view count. Videos that were duplicates, not in English and did not visually show LCCs were not analyzed.

Due to the independent nature of a thesis Halley Myers was the only individual to collect, code, and analyze the data. The video name, title, link, verbal mention of flavoring, visual mention of flavoring, blunt usage, the physical act of smoking, the number of views, and the number of comments were collected on a Microsoft Excel document.

## **Section 2: Basic Instructions for Video Review:**

1. Review coding manual and code sheet before viewing the videos.
2. Watch each video and pause to code elements in codebook.
3. Watch each video as many times as needed to complete the coding.
4. Make any necessary notes at the end of the viewing each video.

## **Section 3: Study Variables, Definitions, and Decision Rules for Coding Video Clips**

### *Section I: Descriptive Information*

1. Video Title: Write the mane of the video title as shown on YouTube
2. Video Link: Copy and paste the share link YouTube provides

### *Section II: Video Engagement*

#### Flavoring

1. Package with flavor clearly written on it. Can be on a wrapper, a box, or any other type of packaging.
2. Flavor verbally mentioned with a name of the flavor and a taste and/or smell description.

#### Usage

1. Smoking shown: Mouth to lit LCC.
2. Blunt usage: blunts being made or verbal or written mentioning of putting marijuana in an LCC.

### **III. Little Cigar and Cigarillo YouTube Video Code Book**

#### Name and Information

1. YouTube Video Name: \_\_\_\_\_
2. YouTube Video Link: \_\_\_\_\_
3. Channel Name: \_\_\_\_\_

#### Engagement

1. Number of Views: \_\_\_\_\_
2. Number of Comments: \_\_\_\_\_

#### Flavoring

1. Visible package with the flavor on it.

- a. Yes (1)
  - b. No (0)
2. Flavor verbally mentioned at least once with a smell and/or taste mentioned
- a. Yes (1)
  - b. No (0)

#### Smoking

1. The person put lips to lit LCC (the act of smoking)
- a. Yes (1)
  - b. No (0)

#### Blunt Usage

1. The LCC was taken apart to and remade to smoke marijuana out of.
- a. Yes (1)
  - b. No (0)