Emotions and Content Themes associated with Substance Imagery in Hip-Hop and R&B YouTube Music Videos

by
Christina Chac

A THESIS

submitted to
Oregon State University
Honors College

in partial fulfillment of
the requirements for the
degree of

Honors Baccalaureate of Science in Public Health
(Honors Scholar)

Presented March 6, 2017
Commencement June 2017
AN ABSTRACT OF THE THESIS OF

Christina Chac for the degree of Honors Baccalaureate of Science in Public Health presented on March 6, 2017. Title: Emotions and Content Themes associated with Substance Imagery Use in Hip-Hop and R&B YouTube Music Videos.

Abstract approved:____________________________________________________

Kari-Lyn Sakuma

YouTube is a free video watching and uploading site that allows endorsing and sharing of videos. Youth and adolescents as top viewers of YouTube may be exposed to images and messages on tobacco, marijuana and alcohol use behaviors.

The research project entailed deriving a list of songs from the 2014 Billboard Top 25 Weekly Hot Hip-Hop and R&B songs, resulting in 112 unique ranked song titles. Of the 112 songs, 95 songs had official music videos. The videos of the songs were downloaded from a website that converted YouTube video links to MP4 videos. Three independent reviewers who created the coding scheme initiated the coding process. From there, 95 videos were coded to obtain the results that were presented.

Out of 95 videos viewed, 74 percent (n=70) contained at least one substance reference or image. Alcohol and marijuana substance imagery were associated with emotional and content themes of ‘relaxed’, ‘partying’, and ‘having a good time.’ Multiple music videos featured product placement of alcohol brands (e.g. GTV, MYX, Ciroc, Zing, and Cavoda) and hookah machinery brand, BLOW Hookah. Other findings included the presentation of children surrounded by substance in three music videos.
With the findings in this research, public health practitioners can address the imagery portrayed in these videos that can influence youth to form norms about alcohol, tobacco, alternative tobacco, marijuana, and illicit substances.

Key Words: Emotions, content themes, associations, substance use, substance implied use, Hip-Hop, R&B, YouTube, YouTube music videos, music videos

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I understand that my project will become part of the permanent collection of Oregon State University, Honors College. My signature below authorizes release of my project to any reader upon request.

_____________________________________________________________________
Christina Chac, Author
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INTRODUCTION

Background

Alcohol is the leading choice for substance use in adolescents (Johnston, O’Malley, Miech, Bachman, & Schulenberg, 2016). About 64 percent of students have consumed alcohol by the end of their high school career (Johnston et al., 2016). Meanwhile, marijuana and tobacco use are other prevalent choices of substance use following alcohol (Johnston et al., 2016). In 2015, 35 percent of high school seniors reported drinking alcohol within the past month, followed by 21 percent having used marijuana, and 11 percent having smoked cigarettes (Johnston et al., 2016). Adolescent substance use can be harmful because adolescents can form life-long habits that may lead to negative consequences. Substance misuse can lead to dependency, alteration of brain development, health complications, and at worst, death (Hall, 2006; U.S. Department of Health and Human Services, 2007).

Movies and Tobacco

Historically, tobacco use was commonly portrayed in movies. Two decades ago, about 87 percent of popular movies showed tobacco use (Dalton, Tickle, Sargent, Beach, Ahrens, & Heatherton, 2002). In a further study, Sargent, Dalton, Beach, Mott, Tickle, Ahrens, & Heatherton (2002) surveyed middle school students to explore relationships between their status of smoking and the amount of tobacco exposure in movies. The survey included the exploration of attitudes in regards to smoking behavior, normative views of smoking, and personal expectations of smoking and exposure of tobacco in
movie samples. Sargent et al. (2002) study reported 23.7 percent of adolescents were susceptible to smoking and 21.4 percent of the students considered peer smoking as normal. Overall, Sargent’s et al. (2002) study suggests a strong relationship between portrayal of tobacco use in movies and adolescent smoking behavior and positive expectations of smoking can be influential.

Tobacco use in movies can be influential to adolescent tobacco use because adolescents look up to their favorite stars. In another study by Tickle, Sargent, Dalton, Beach, and Heatherton (2001), they examined relationships between adolescents’ favorite movie stars, portrayal of tobacco use between those particular stars, and adolescent smoking. Students in sixth through 12th grade participated in a survey which included star preference, smoking experience, and smoking susceptibility (Tickle et al., 2001). The sample of students contained students with all various smoking experiences (Tickle et al., 2001). The surveys compiled a list of 43 favorite actors, 65 percent which portrayed tobacco use at least one time (Tickle et al., 2001). The study calculated the adolescents’ odds ratio of being higher in tobacco use status. Adolescents whose favorite celebrity used tobacco in one movie showed an odds ratio of 0.78 (p=0.2) for more likely to having a higher tobacco use status. For adolescents whose favorite celebrity used tobacco in two movies showed an odds ratio of 1.53 (p=0.046) for more likely to having a higher tobacco use status; adolescents who favorite stars appeared to use tobacco in three of more movies were three times showed an odds ratio of 3.09 (p=0.008) for more likely to having a higher tobacco use status (Tickle et al., 2001). This study suggests that there is a strong relationship between media portrayal between popular movie stars and adolescent smoking (Tickle et al., 2001).
More Social Influences in the Media

Among various factors of influence of adolescent substance use, music may be one of them. Music is a powerful medium through which friends socialize (Mulder, Ter Bogt, Raaijmakers, Gabhainn, Monshouwer, & Vollebergh, 2009). Music preference and peer substance use perception are two factors that can help explain adolescent substance use (Mulder et al., 2009). Music can be a tool in socializing, so music preference is often shared among friends. In addition, group identity of adolescents and music preference are interrelated (Mulder et al., 2009). Substance use would differ among music genres and group identity. Verkooijen, Nielsen, & De Vries (2007) surveyed youth to measure social group identity, substance use, and perceived group norm of smoking and marijuana use. This study revealed that groups who identified with pop, skate/hip-hop, techno, and hippie music group identities had higher prevalence in substance use than other groups (Verkooijen et al., 2007). For adolescents who reported smoking, 53.5 percent identified with pop, 53.3 percent identified with techno, and 49.2 percent identified with skate/hip-hop (Verkooijen et al., 2007). For adolescent who reported marijuana use, 35 percent identified with skate/hip-hop, 32.1 percent identified with hippie, and 20.9 percent identified with techno, (Verkooijen et al., 2007). For adolescents who reported alcohol use, 85 percent identified with hippie, 78.3 percent identified with skate/hip-hop, 75 percent identified with pop, and 71.1 identified with techno, (Verkooijen et al., 2007). These subgroups showed high levels of substance use and were expected to be outgoing and engage in more social events (Verkooijen et al., 2007). This study showed participants who took the survey disclosed that they were more likely to smoke or use
marijuana if their group members used substances (Verkooijen et al., 2007). The results also suggest that group norms are associated to substance use (Verkooijen et al., 2007).

**Music and Substance References**

Aside from tobacco use in movies, other substances are also referenced in the various types of media. Music is another type of media that references substance use in an auditory manner, especially with lyrics. Primack, Douglas, and Kraemer (2009) study explored the association between cannabis exposure in popular music and cannabis use. The ninth grade student participants in Primack’s et al. (2009) study reported that they had the exposure to an average of 21.8 hours of popular music per week, of which an average of 40-cannabis lyrical references in the popular music listened to per day. About 32 percent of the participants had noted ever using cannabis (Primack et al., 2009). The results had suggested that popular music could be a risk factor for adolescents exposed (Primack et al., 2009). Higher levels of cannabis reference or exposure in the music content showed higher levels of cannabis use (Primack et al., 2009).

**Hip-Hop and R&B Music Genre**

Certain music genres can also reference various substance use. Mulder’s et al. (2009) study examined the association between music preference, self-reported substance use, perceived substance use by peers, and the relationship between music preferences and own substance use. Mulder’s et al. (2009) study measured the association between music preferences, self-reported adolescent substance use, and perceived substance use by peers by surveying adolescents. Mulder et al. (2009) reported more positive feedback from the participants in regards to Dutch pop music, rap/hip hop and soul/R&B. Mulder et al. (2009) concluded from their own study and other previous studies a positive
association between rap/Hip-Hop and substance use of alcohol, cigarette, and cannabis in video and lyrical content (Mulder et al, 2009).

**Music Videos in MTV, BET, VH-1, and YouTube**

Along with substance use references in music content alone, substance use imagery in music videos could be just as influential. Music Television (MTV), Black Entertainment Television (BET), and Video Hits (VH-1) are American television networks organized by Viacom Media Networks, where music videos from popular artists can be viewed daily (Viacom Brands, 2017). Previously, Roberts’ (2002) analyzed music genres of Hot-100 (Top-40), Rap/Hip-Hop, Mainstream Rock, Modern/Alternative Rock, and “other” in BET, MTV and VH-1 music television networks (Roberts et al., 2002). Roberts’ (2002) study found that substances were shown in more than half (55 percent) of the Rap/Hip-Hop videos (Roberts’, 2002). Similarly, Gruber, Thau, Hill, and Fisher’s (2005) study observed references to alcohol, tobacco, and other various drugs in MTV and BET music videos (Gruber et al., 2005). Alcohol and illicit substances were featured in rap and hip-hop genre music videos more than any other genre music videos (Gruber et al., 2005). This study reported substance use was more likely to be featured in rap and hip-hop music videos compared to other genres such as Rock, Rhythm & blues, and Pop (Gruber et al., 2005).

Cranwell, Murray, Lewis, Leonardi-Bee, Bockrell, and Britton (2015) study explored tobacco and alcohol imagery exposure in popular YouTube music videos and measured adolescent exposure to the music videos. Cranwell’s et al. (2015) study reported 45 percent alcohol imagery, 22 percent of tobacco imagery and 2 percent e-cigarette imagery in YouTube music videos. Tobacco and alcohol imagery of substance
use and implied use occurs in lyrically and visually in popular YouTube music videos and viewed by many adolescents (Cranwell et al., 2015). This study concluded that greater exposure of tobacco and alcohol imagery has an impact on smoking and alcohol consumption in adolescents (Cranwell et al., 2015).

**YouTube**

YouTube is well known and is one of the most popular free video uploading and sharing websites in the world (About YouTube, n.d.). It is popular among youth and adolescents, ages ranging from 12 – 17 (Nielsen, 2006). Through YouTube, the audience can listen to music of their interest while viewing the perspective music video. YouTube also provides a link in which users can share with one another (Freeman & Chapman, 2007). YouTube is highly accessible through smartphones, tablets, and other technological devices. There are more than 88 countries with versions of YouTube and can be viewed in 76 various languages (Statistics, n.d.). With minor restriction and regulation policies, tobacco companies are able to use YouTube as an exploitation device to influence the audience to use their tobacco products (Freeman & Chapman, 2007). Media commentators have expressed concern that YouTube video uploads are now being used as advertisement for tobacco and other alternative tobacco companies (Freeman & Chapman, 2007). By incorporating smoking imagery and other substance use in YouTube music videos, tobacco companies achieve broad media exposure (Freeman & Chapman, 2007). This is similar to movies and how portrayal of tobacco use is influential to adolescents (Sargent et al., 2002; Tickle et al., 2001). Portrayal of substance use and positive consequences in YouTube music videos may be a potential problem because it could be a risk factor for substance use among adolescents.
Theories and Associations

The Social Cognitive Theory is characterized by relationships between behaviors, environmental factors, and personal factors (Bandura, 1986). The Social Cognitive Theory suggests that those who identify to modeled behavior are more inclined to imitate those behaviors (Bandura, 1986).

Primack, Dalton, Carroll, Agarwal, and Fine (2008) based their study on the Social Cognitive Theory by assessing motivations, associations that are desirable and consequences that are positive in popular music substance use references. The results of this study reported 41.6 percent of substance use references (Primack et al., 2008). The motivations for substance use identified in this study were peer or social pressure, sexual, and financial where sexual and financial motivations were significant in rap and R&B/hip-hop songs (Primack et al., 2008). The associations with substance that were identified in this study were partying, sex, violence, dealing or trafficking, and humor (Primack et al., 2008). Finally, 68 percent of the songs entailed more positive than negatives consequences with 48 percent of the songs portraying positive social consequences (Primack et al., 2008). This study suggests that the negative consequences portrayed are not more detrimental than positive consequences portrayed in popular music (Primack et al., 2008). This study concluded that adolescents are highly exposed to substance use in various popular music genres where motivations are common in peer acceptance and sex and contains overall positive associations and consequences (Primack et al., 2008). The Social Cognitive Theory also suggests that the exposure of substance use and product placement by celebrities may influence adolescents’ behavior and conform to positive attitudes in regards to substance use especially in popular music
(Gruber et al., 2005). A series of studies may suggest that the behavior and lyrics of favorite artists can demonstrate a modeling effect by mentioning, using and celebrating the use of substances as “desirable” behavior (Mulder et al., 2009). Mulder et al. (2009) investigated relationships between music preferences, self-reported substance use in adolescents, and perceived peer substance use. Mulder et al. (2009) reported that soul/R&B and rap/Hip-Hop were positively rated and influenced by perceived substance use.

The Cultivation Theory (Gerber, Gross, Morgan, Signorielli, & Shanahan, 2002) suggests that viewing the messages in the media frequently increases the influence that the media has on personal beliefs and norms. Gruber et al. (2005) performed content analyses of alcohol, tobacco, and illicit substance use in music videos. The study entailed music video samples from MTV and BET. Substances, product placement, logos, advertisement, emotion of humor, and music genre were recorded (Gruber et al., 2005). The emotion of humor can affect adolescents by having everlasting impressions and influence substance use (Grube & Wallack, 1994). In this study, 43 percent of music videos portrayed substance use (Gruber et al., 2005). This study reported that substance use was prevalent in rap and hip-hop videos than other genres (Gruber et al., 2005). Emotions of humor were associated with alcohol and illicit substance use in the music videos (Gruber et al., 2005).

**Purpose and Hypothesis**

The purpose of this project was to identify the associations between substance use imagery with emotions and content themes in YouTube music videos. Movies and YouTube music videos share similarity in which both show imagery content. In Hip-Hop
and R&B YouTube music videos, we expect to find positive emotions and content themes in substance use portrayed in the various Hip-Hop and R&B music culture because peer and substance use perception seen in this music genre (Cranwell et al., 2015; Mulder et al., 2009; Gruber et al., 2005; Roberts et al., 2002). Our data may contribute to previous findings to show what how substance use is portrayed in music videos.

METHODS

Establishing Song List

We searched for a Billboard 2014 Top R&B/Hip-Hop/rap song list. We found the Billboard Weekly Top Weekly 25 Hot Hip-Hop & R&B of 2014 list that started from January 4th through December 27th. Billboard’s “Hot R&B/Hip-Hip Songs” lists ranking is determined by radio airplay, sales data, and streaming activity data that is compiled by Nielsen Music (Billboard, 2014). The songs from each were recorded in an Excel spreadsheet by song name, and artists, ranking by each week. A number of songs were ranked multiple times on the top 25 lists for several weeks, or they may appear once throughout the year. New songs ranked for the first time were added to the list in order to produce a unique song lists without repeating song titles. From that list, 112 unique songs were derived that were ranked through 2014. Each song from the 112-song list was searched on YouTube for an official music video. If the song had an official music video released by the artist or recording label, the link was recorded on the Excel sheet. From a list of 112 songs, 95 songs had official music videos. In the Excel spreadsheet, the date that the YouTube video was downloaded, YouTube link of the video, number of views, number of thumbs up indicating approval of the video, number of thumbs down
indicating disapproval, music video date published, and shares of the video were documented. A free software named YOUTUBEINMP4 was used to download all 95 music videos. Using the YOUTUBEINMP4 software website, we entered the individual YouTube links to download the music videos and stored on an external hard drive.

**Coding Music Videos**

Primack’s et al. (2008) study coded for motivations of peer or social pressure, sex, mood management, financial, and addiction/craving. Primack’s et al. (2008) study also coded for substance use association with violence, sex, humor, partying, dealing/trafficking, a reference to a specific brand, operation of a vehicle, refusal to use, and limit setting. Primack’s et al. (study) also coded for consequences for mental, emotional, physical, social, legal, financial, and sexual behaviors. Gruber’s et al. (2005) coded for humor or playfulness themes such as silly, weird, or fun because previous studies found that humor can appeal to adolescents. In contrast to Primack’s et al. (2008) and Gruber’s et al. (2005) studies, our study coded for emotions and content themes. Emotions that were coded include anger, depressed/sad, pride, happy, relaxed, or other. Content themes that were coded include sex, wealth, money, power, powerless, violence, party or good time.

From previous studies, Cranwell et al. (2015) study coded for alcohol and tobacco use, implied use, paraphernalia, brand appearance, and any other alcohol or tobacco content. In addition, electronic cigarettes were coded under tobacco content for Cranwell’s et al. (2015) study. Gruber’s et al. (2005) study observed alcohol, tobacco, and illicit drugs use or implied use along with logos or paraphernalia. Mulder’s et al (2009) study explained that alcohol, and tobacco, and marijuana references were
prevalent in popular music so they coded for those three substances. Verkooijen’s et al. (2007) study surveyed adolescents for alcohol, tobacco, and marijuana use perceptions. Primack’s et al. (2008) study recorded tobacco, alcohol, and marijuana use and combined other various substance use together because they were less frequently mentioned.

In our study, we decided to code for substance use and implied use for the various substances. The depiction of ‘substance use’ was viewed as actually using the substance such as consuming alcohol or smoking a cigarette. The depiction of ‘implied substance use’ was viewed as product placement or individuals holding a product but not physically using the product.

The substance list referred to alcohol, cigarettes, large cigar, little Cuban cigars, hookah, electronic cigarette (e-cigarette) or vape, and marijuana. We isolated the tobacco products (cigarettes, large cigar, little Cuban cigars, hookah, e-cigarette or vape) because different products could identify with different themes such as wealth or power.

Alcohol was portrayed in the form of beer, liquor, wine, or champagne. Alcohol usually had blatant product placement. Alcohol is commonly depicted by red solo cups, cans or bottles of beer, bottles of champagne or liquor, and glassware. Cigarettes are distinctively depicted as a cigarette pack, cigarette itself or butt. Large cigars are depicted as large dark brown wrapped tobacco stick. Cigarillos or little cigars are small and skinnier than large Cuban cigars but still wrapped in dark brown paper. Hookah machinery is depicted with the hookah base with one or more hoses attached to the base that produces vapors. E-cigarettes or vapes are depicted as handheld, electronic tobacco devices that produce vapors. Marijuana was commonly depicted as blunts or joints. Blunts are marijuana rolled in specialty paper or in tobacco leaf repurposed from
cigarillos. Joints are smaller and skinner than blunts and are rolled in papers typically marketed for roll-your-own cigarettes, thus is about the size of a small cigarette.

Emotions and content themes in this study were defined by set descriptions. For emotion description of imagery, ‘angry’ was defined as aggressive, rough or mad. ‘Depressed’ or ‘sad’ imagery was defined as alone, frowning, or person is physically looking down. ‘Pride’ imagery was defined as looking pleasurable or satisfied, displaying achievement, sexual appeal or wealth. ‘Happy’ was defined as smiling or laughing. ‘Relaxed’ was defined as being laid back, being served, calm, or having a neutral face. The ‘other’ emotion category pertained to an open-response were recorded and listed in Table 1. The “other” emotions were noteworthy but did not appear on the graphs due to being outliers of the data. For content themes, ‘sex’ was defined as provocative men and women and being half-naked or entirely naked. ‘Wealth’ was defined as displaying luxury, large houses or mansions, brand names, and jewelry. ‘Money’ was defined by the actual display of money. ‘Power’ was defined as being served, in control, and authoritative. ‘Powerless’ was defined as not having control or displaying defeat. ‘Violence’ was defined as killing, harming, hurting, or fighting. ‘Partying’ or ‘having a good time’ was defined by large crowds of people, pool parties, dancing, or clubs scenes. The ‘other’ content theme category was pertained to an open-response were recorded and listed in Table 1. The “other” content themes were noteworthy but were not displayed on our graphs due to being outliers of the data.

A coding sheet was created and used to code videos by a previous project to identify substance use and imagery in Hip-Hop, R&B, and Popular YouTube music.
videos. Three independent coders coded seven pilot videos (20 percent overlapping videos) to practice for reliability and consistency.

Modeled by the previous coding sheet, the video name, coder name, duration of video, and date reviewed was recorded. The main and secondary characters, also known as the artists, were noted based on gender, age, race and ethnicity. Substance use was defined by the substance actually being used by a character in the music video. Substance implied use was defined by the substance being featured in a scene by product placement or a product being held by a character in the music video but not actually using the substance. Substance use imagery was recorded based on individual unique uses. Multiple scenes of the same character and same substance use imagery were disregarded. Similarly, multiple large party scenes with the same alcohol use and implied use were recorded once. The time that the substance use or implied use took place, substance use or implied use (alcohol, cigarettes, large cigar, little Cuban cigars, hookah, e-cigarette or vape and marijuana), brand, number of people in the scene (alone, intimate, small group, or party), and context or a description of the scene were recorded on the coding sheet. Emotion (anger, depressed/sad, pride, happy, relaxed, or other) and content theme (sex, wealth, money, power, powerless, violence, party or good time) were assessed and recorded to identify emotions and content themes associated with substance use and implied use. Three pilot videos were coded to check for reliability by two independent coders.

**Compiling Data from Coding Music Videos**

The data from the coding sheets were compiled into a Google spreadsheet two different Excel sheets. Individuals coding sheets contained counts of images, emotions,
and content themes. This was recorded into the first Excel workbook. Each sheet contained the rows that were named by each substance use image. The columns featured the separate emotions and themes that we used. Each occurrence would be marked based on how many times the substance was associated with the emotion or theme. This was completed for all 95 music videos in separate sheet tabs (see Figure 1).

The second part of compiling the data consisted of the number of times substances were used or implied to be used with associated emotions and themes. This Excel spreadsheet featured the separate columns that differentiated the code number for the song and separate emotions and content themes that we used. We systematically examined each coding sheet of the music video and entered the number of times the emotion or content theme appeared. Each occurrence would be marked based on how many times the substance imagery was associated with the emotion or theme. In the Excel table, we summed the cells to compute how many videos portrayed the specific emotion or content theme. We created tabs for every substance: Alcohol, cigarettes, large cigar, cigarillo/little Cuban cigar, hookah, e-cigarette/vape, marijuana, lean, cocaine, and other. Altogether, we created 20 tabs which included each substance with use or implied use data (see Figure 2).

**Graphs and other Calculations**

We used the calculations from the second set of Excel sheets to produce graphs. The columns were entered as emotion or content theme, substance use, and substance implied use. We also included two additional columns to calculate the proportion of times the emotion or content theme was associated with the substance use and implied use over
the overall number of music videos. This provided the prevalence emotion and content theme associated to each type of substance.

Using the second set of Excel sheet, the overall sums of each emotion and theme were used produce graphs for the substance use and implied use. On the graph, the y-axis indicated the number of videos and the x-axis the emotion and themes deciphered by use and implied use (see Figure 3).

**RESULTS**

*Data Analysis*

In this project, we identified the associations between substance use and imagery with emotions and content themes in Hip-Hop and R&B YouTube music videos. We found that 74 percent (n= 70) of the video sample contained at least one substance image or reference.

For the most prevalent emotion, ‘relaxed’ was portrayed in 36 percent (n=34) music videos with alcohol implied use (see Graph 1). The emotion of ‘relaxed’ was also prevalently portrayed in 25 percent (n=24) of the music videos for marijuana use (see Graph 7). The prevalent content theme ‘partying’ and ‘having a good time’ was portrayed in 44 out of 95 (46 percent) music videos for alcohol implied use (see Graph 1). The content theme ‘partying’ and ‘having a good time’ was portrayed in 23 percent (n=22) music videos portrayed the ‘partying’ and ‘having a good time’ with marijuana use (see Graph 7).

Various coded emotions and content themes were portrayed in a certain amount of YouTube videos other than the ones previously mentioned. For alcohol substance implied use, ‘happy’ was portrayed in 28 percent (n=27) of the music videos, ‘sex’ was portrayed
in 26 percent (n=25), ‘wealth’ was portrayed in 25 percent (n=24) of the music videos, and ‘power’ was portrayed in 24 percent (n=23) of the music videos (see Graph 1). For alcohol substance use, ‘relaxed’ associated with 11 percent (n=11) of the music videos, ‘happy’ associated with 14 percent (n=13) of the music videos and ‘partying’ and ‘having a good time’ were portrayed in 18 percent (n=17) of the music videos (see Graph 1). For marijuana implied use, 11 percent (n=10) of the music videos were associated with ‘relaxed’, ‘party’, and ‘having a good time’ (see Graph 7).

For other portrayal of emotions in substance imagery, eight percent (n=8) of e-cigarette use (see Graph 6), seven percent (n=7) of cigarette use (see Graph 2), seven percent (n=7) of large cigar use (see Graph 3), five percent (n=5) of cigarillo use (see Graph 4), three percent (n=3) of hookah use (see Graph 5), two percent (n=2) of lean implied use (see Graph 8), and two percent (n=2) of cocaine implied use (see Graph 9) often associated with ‘relaxed’.

For commonly portrayed content themes in substance imagery, nine percent (n=9) of alcohol and marijuana use (see Graph 1 and Graph 7), six percent (n=6) of large cigar use (see Graph 3), three percent (n=3) of e-cigarette use (see Graph 6), two percent (n=2) of cigarillos (see Graph 4), two percent (n=2) of hookah use and implied use (see Graph 5), and two percent (n=2) of cocaine implied use (see Graph 9) associated with ‘wealth’. ‘Power’ was associated with 11 percent (n=11) of marijuana use (see Graph 7), seven percent (n=7) of alcohol implied use (see Graph 1), six percent (n=6) of large cigar use (see Graph 3), three percent (n=3) of cigarillo use (see Graph 4), three percent (n=3) of e-cigarette (see Graph 6), two percent (n=2) of cigarette implied use (see Graph 2), two percent (n=2) of hookah use (see Graph 5). ‘Partying’ and ‘having a good time’ was
also associated with 10 percent (n=10) of marijuana implied use (see Graph 7), eight percent (n=8) of e-cigarette use (see Graph 6), five percent (n=5) of cigarette implied use (see Graph 2), four percent (n=4) of lean implied use (see Graph 8), three percent (n=3) of large cigar use (see Graph 3), three percent (n=3) of cigarillo use (see Graph 4), and three percent (n=3) of hookah use (see Graph 5). ‘Pride’ was associated with 10 percent (n=10) of alcohol implied use (see Graph 1) and four percent (n=4) of marijuana use and implied use (see Graph 7). ‘Money’ was associated with seven percent (n=7) alcohol implied use (see Graph 1), three percent (n=3) of marijuana use (see Graph 7), two percent (n=2) of cigarette implied use (see Graph 2), and two percent (n=2) of large cigar use (see Graph 3).

For portrayal of negative emotions substance use imagery, seven percent (n=7) of alcohol implied use associated ‘depressed’ and ‘sad’ (see Graph 1). ‘Powerless’ was associated with seven percent (n=7) of alcohol implied use (see Graph 1), two percent (n=2) of cigarette use (see Graph 2) and two percent (n=2) of e-cigarette use (see Graph 6). ‘Anger’ was also associated with two percent (n=2) with alcohol implied use (see Graph 1).

**Other Emotions and Content Themes associated with Substance Imagery**

The coding sheet allowed us to evaluate the substance use and implied use with the emotions and themes. At times, other emotions were recorded outside of the established categories due to the portrayal of the scene. The “other” emotions and content themes remained noteworthy because it shows how substance use imagery can be depicted in other ways. However, the “other” emotions and content themes did not appear on the graphs due to being outliers of the data set (see Table 1).
<table>
<thead>
<tr>
<th>Substance</th>
<th>Other Emotions</th>
<th>Other Content Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol (Use)</td>
<td>–</td>
<td>Defeat</td>
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<tr>
<td></td>
<td></td>
<td>Rebellion</td>
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<tr>
<td>Alcohol (Implied Use)</td>
<td>Disappointed</td>
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<td></td>
<td>Confused</td>
<td>Sleepiness</td>
</tr>
<tr>
<td></td>
<td>Fierce</td>
<td>Delusional</td>
</tr>
<tr>
<td></td>
<td>Anxious</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Guilty</td>
<td></td>
</tr>
<tr>
<td>Cigarette (Use)</td>
<td>–</td>
<td>Mysterious</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rebellion</td>
</tr>
<tr>
<td>Cigarette (Implied Use)</td>
<td>Surprised</td>
<td>Rebellion</td>
</tr>
<tr>
<td>E-Cigarette/ Vape (Use)</td>
<td>Distress</td>
<td>Addiction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shame</td>
</tr>
<tr>
<td>E-Cigarette/ Vape (Implied Use)</td>
<td>Exhaustion</td>
<td>Amazement</td>
</tr>
<tr>
<td>Marijuana (Use)</td>
<td>Silly</td>
<td>Rebellion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Delusional</td>
</tr>
<tr>
<td>Marijuana (Implied Use)</td>
<td>Annoyed</td>
<td>Euphoria</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intoxication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sleepiness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Protection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Argumentative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Attraction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Delusional</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rebellion</td>
</tr>
<tr>
<td>Cocaine (Implied Use)</td>
<td>Euphoria</td>
<td>Intoxication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sleepiness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Business Protection</td>
</tr>
</tbody>
</table>

Table 1. Table of other emotions and content themes associated with substance use imagery in music videos

**Other Substances featured in Hip-Hop and R&B YouTube Music Videos**

Some music videos featured a substance concoction of codeine, promethazine, and Sprite, also known as its street name, Lean. Lean was featured in various music videos such as *Tuesday* by ILOVEMAKKONEN featuring Drake, *My Hittas* by YG featuring Jeezy and Rich Homie Quan, *Hot Boy* by Bobby Shmurda, *Made Me* by Snootie Wild featuring K.Camp, *We Dem Boyz* by Wiz Khalifa, and *No Flex Zone* by Rae
Sremmurd (ILoveMakonnen, 2014; YGVEVO, 2013; BobbyShmurdVEVO, 2014; SnootieWildVEVO, 2014; Wiz Khalifa, 2014; RaeSremmurdVEVO, 2014). This concoction was indicated by people holding or sipping liquid substance out of double stacked white cups. Cocaine was another substance that was featured in music videos such as *CoCo* by O.G. Genasis and *John Doe* by B.o.B. featuring Priscilla Renea. In *CoCo* by O.G. Genasis, cocaine was shown as white powder being separated by playing cards and bagged in plastic quart bags to sell. It was also depicted as using a rolled hundred dollar bill to sniff white powder through the nasal passages using a by the user in *John Doe* by B.o.B. featuring Priscilla Renea.

**Branding**

Throughout the coding process, substances such as alcohol, cigarettes, e-cigarettes, and hookah were identifiable with brands. An extensive list of alcohol brands were recorded (see Table 2). The only cigarette brand featured was Marlboro, where the cigarette packs were shown. Other depictions of cigarettes portrayed individuals smoking cigarettes. The e-cigarette brand included Eon, also known as Economy Smoke. The hookah brand featured BLOW Hookah, which is an electronic hookah machine (see Table 2).

<table>
<thead>
<tr>
<th>Substance</th>
<th>Substance Brand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>Malibu Red</td>
</tr>
<tr>
<td></td>
<td>Conjure</td>
</tr>
<tr>
<td></td>
<td>Nuvo</td>
</tr>
<tr>
<td></td>
<td>Special Edition Remy Martin</td>
</tr>
<tr>
<td></td>
<td>Ciroc</td>
</tr>
<tr>
<td></td>
<td>Royal Moscato Rose Santero</td>
</tr>
<tr>
<td></td>
<td>Rosa Sparkling Red</td>
</tr>
<tr>
<td></td>
<td>GTV</td>
</tr>
<tr>
<td></td>
<td>Zing</td>
</tr>
<tr>
<td></td>
<td>Seagram Vodka</td>
</tr>
<tr>
<td></td>
<td>Birthday Care Vineyard Strawberry</td>
</tr>
</tbody>
</table>
Table 2. Table of Product Placement of Substances with Brand Names

<table>
<thead>
<tr>
<th>Substances</th>
<th>Brand Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortcake Wine</td>
<td></td>
</tr>
<tr>
<td>Moskato Life</td>
<td></td>
</tr>
<tr>
<td>Old English</td>
<td></td>
</tr>
<tr>
<td>Blue Ribbon</td>
<td></td>
</tr>
<tr>
<td>Coors</td>
<td></td>
</tr>
<tr>
<td>XO</td>
<td></td>
</tr>
<tr>
<td>Avion</td>
<td></td>
</tr>
<tr>
<td>Myx</td>
<td></td>
</tr>
<tr>
<td>Myx Moscato</td>
<td></td>
</tr>
<tr>
<td>Cavoda</td>
<td></td>
</tr>
<tr>
<td>Cigarette</td>
<td>Marlboro</td>
</tr>
<tr>
<td>E-Cigarette/Vape</td>
<td>Eon (Economy Smoke)</td>
</tr>
<tr>
<td>Hookah</td>
<td>BLOW Hookah</td>
</tr>
</tbody>
</table>

**Children**

Three music videos from the list featured children in scenes where substance use and implied use occurred. The children were not portrayed to be using the substances; however, they were in the scenes where substance use and implied use occurred around them. In *Try Me* by Dej Loaf, children were featured in scenes where there was alcohol imagery (dejloafVEVO, 2014). In *We Dem Boyz* by Wiz Khalifa, children were featured in scenes where there was cigarette implied use and marijuana implied use (Wiz Khalifa, 2014). In *Lifestyle* by Young Thug, children were featured in scenes where there was lean implied use (RichGangVEVO, 2014).

**DISCUSSION**

The purpose of this project was to identify the associations between substance use and imagery with emotions and content themes in Hip-Hop and R&B YouTube music videos. We expected to find positive emotions and content themes in substance use portrayed in the various Hip-Hop and R&B music culture.
Our data demonstrated more reoccurring positive emotions and content themes than negative emotions and content themes, which translates to showing more positive consequences than negative consequences. Marijuana use and alcohol implied use were mostly depicted as ‘relaxed’, ‘partying’, and ‘having a good time’ (see Graph 7). Alcohol implied use also depicted ‘happy’, ‘sex’, ‘wealth’, and ‘power’ (see Graph 1). Positive emotion and content themes were associated with certain substance use or implied use. This finding is detrimental because exposure to substance use images has been shown to influence use of substances (Cranwell et al., 2015; Primack et al, 2010; Mulder et al., 2009; Gruber et al., 2005; Roberts, 2002). When substance use is referenced or celebrated through lyrics or visual depictions, adolescents could be influenced by these gestures as desirable actions (Mulder et al., 2009; Gruber et al., 2005).

Alcohol implied use portrayed more positive emotions and content themes compared to negative emotions and content themes such depressed, sad and powerless (see Graph 1). Although there were negative emotion and content themes portrayed such as depressed, sad, and powerless in some music videos, most of the positive consequences such as happy, relaxed, sex, wealth, power partying and having a good time of substance use or implied use were also associated with alcohol. This commonality is reflective of our overall data because our results show that positive emotions and content themes were portrayed more than the negative emotions and content themes. Negative consequences may not be as impressionable because adolescents identify and are more concerned with positive consequences (Primack et al., 2008).

The higher levels of positive emotion and content theme portrayals in Hip-Hop and R&B YouTube music videos we have detected may be influential to the audience,
especially adolescents. Primack et al. (2008) study explored motivational factors such as peer or social pressure, sexual, and financial where sexual and financial motivations. Primack et al. (2008) also explored associations with substance such as partying, sex, violence, dealing or trafficking, and humor. In contrast to Primack et al. (2008) study, our study examined emotions and content themes. This is important because emotions and content themes portray either positive or negative consequences. Viewers of these music videos may be more inclined to imitate behaviors that are portrayed positively and frequently. Both studies showed a greater amount of positive consequences associated with substance use. In the previous studies that looked at tobacco use in movies, it has been suggested that exposure is a risk factor for substance use, thus the high prevalence of substance use imagery may also be a significant risk factor (Dalton et al., 2002; Primack et al., 2008).

Music can send a special message, especially amongst a group of peers who build norms and incorporate group identities around substance use (Verjooiken et al., 2007). If substance use or implied use consequences are constantly portrayed positively, adolescents may appeal to substance use and view the action to be acceptable. Adolescents begin to form habits in this age group and are willing to explore new activities that are appealing, yet could potentially be harmful to them.

Previous Studies in Comparison

Our study shared similarities and differences with other related studies. Cranwell et al. (2015) performed a content analysis of visual and lyrical content in UK Top 40 YouTube music videos and proceeded with surveying adolescents for viewing measures. Their findings showed alcohol and tobacco visual and lyrical content exposure appeared
in a great number of video in pop, hip-hip/rap, dance and alternative YouTube music videos. Their findings suggest great exposure to substance use in YouTube music videos has an influential effect on tobacco and alcohol use in adolescents (Cranwell et al., 2015).

In contrast to Cranwell’s et al. (2015) and Primack et al. (2008), our study aimed to explore visual content of solely Hip-Hop and R&B YouTube music to assess 1) what was the prevalence substance use imagery and 2) what emotions and content themes were associated with those images. Our study focused on exploring hip-hop and R&B music genres and content due to the previous findings in other studies (Cranwell et al., 2015; Mulder et al., 2009; Gruber et al., 2005). We elevated to the next level by exploring the music content through the YouTube music video medium instead of examining movies, MTV television channel, BET television channel or VH-1 television channel. Instead of categorizing substance use as alcohol, tobacco, or illicit substances, we recorded various substances portrayed which include alcohol, cigarettes, large cigars, little Cuban cigars, e-cigarettes or vapes, hookah, marijuana, and cocaine because of the emotions and content theme that each substance may associate with.

Our findings demonstrate that there are high levels of portrayal in positive emotions and content themes, especially in the emotion of ‘relaxed’ and content themes of ‘partying’ and ‘having a good time’ in marijuana use and alcohol implied use. Our project contributes to the conclusion that exposure to substance use and implied use could be associated to influential effects in adolescents.

**How Movies relates to YouTube Music Videos**

YouTube music videos and movies are similar in which both mediums display imagery. In the past, we found that movies that portrayed tobacco use had effects that
influenced tobacco use. Now, YouTube can show music videos not only the portrayal of tobacco use, but it can also portray alcohol, marijuana and other substances that can attract or interest their audience. Therefore, access and exposure to YouTube videos could have an impact on adolescents, where positive consequences can influence individual and group adolescent substance use.

This project quantified the unique substance use and implied use with specific emotions and themes. For the most part, the emotions and themes appropriately described the imagery. However, some imagery was described outside of the categories that were chosen. These emotions and themes were not included in the graphs.

**Product Placements and Potential Advertising**

Product placement occurred in series of music videos with products such as GTV, MYX, Ciroc, Zing, Cavoda, and BLOW Hookah. GTV, which stands for Grand Touring Vodka, is a brand that is associated with rapper Birdman and the Cash Money Record Label (Grand Touring Vodka, 2016). Myx, better known as Myx Fusions, is a brand of Moscatos and Sangrias created by female rapper, Nicki Minaj (Myx Fusions, 2017). Sean Comb, also known as P. Diddy, is the founder of Bad Boy Entertainment Record Label collaborates with Ciroc to market their brand (Ciroc: Our Lifestyle, 2016). These products might be sponsored or endorsed by specific artists as a tactic to market their product to the audience. Children present in music videos with substance use or implied use is another problematic factor because this can relay an influential message to youth and adolescents. It can develop a norm for youth and adolescent that substance use is acceptable in society.
Limitations

The limitations of this project were that the emotions and themes were observed by a single coder. In the future, we could have three individual coders to account for inter-coder reliability. At times, our definitions of emotions and content themes did not match substance use imagery. The portrayal of substance use imagery with emotions and themes could also be interpreted differently depending on the person. In the future, we could refine our definitions to be concise yet match the substance use imagery emotion or content theme. Although viewers might be exposed more to these various substances use imagery along with the associated emotions and themes, our results cannot provide the correlation with viewers’ actual substance use or change perception of substance use. Our results are the products of observing and analyzing a Hip-Hop and R&B of music videos with substance use that contain contents that viewers could be potentially exposed. In addition, our study only focused on the images shown of substance use and implied use and their association with specific emotions and content themes. However, we cannot determine if adolescents are viewing these music videos due to general interest in the music, interest in how substance use is depicted, or if the culture in the music is influencing their behaviors. In the future, we could survey adolescents that view these music videos on their substance use behaviors and their demographics.

Conclusion

The overall portrayal of substance uses and implied uses with emotions and themes could potentially influence viewers. Our results show positive emotion and content theme associated with alcohol consumption and marijuana use among adolescents and could influence the adolescents who view these music videos. In future studies, we
could further this investigation by having viewers respond based on their interpretation of the emotion and content themes displayed in the music videos and possibly measure what effect the consequences may have on adolescents.

In the past, Sargent et al. (2002) study concluded that there a strong relationship between portrayal of tobacco use and adolescent smoking behavior where positive expectations of smoking can be influential. Glantz (2003) expresses reducing the amount of adolescent exposure to tobacco use exposure in movies can be influential effect. This was initiated by the Smoke Free Movies campaign, led by Glantz, to reduce adolescent exposure to smoking in movies (Sargent, 2005). Smoke Free Movies advocates tobacco exposure to be rated R, anti-tobacco advertisements, and ceasing tobacco brand identification (Policy solutions, n.d.). This campaign creates a censorship in which further allows parents to have a decision in what their adolescent exposure and limits tobacco companies.

Creating a campaign for censorship on YouTube for adolescents or have specific guidelines for music video contents are other ways to address how content in music videos can be influential to adolescents and raise awareness. The Center for Tobacco Products has created a campaign called “Fresh Empire” where they have collaborated with various Hip-Hop artists who convey anti-tobacco messages through YouTube videos (Fresh Empire, n.d.). This campaign is relevant because artists rap or speak about why they choose to be tobacco free and how it contributes to their successes (Fresh Empire, n.d.). The viewers of these videos could learn from these messages and potentially become inspired to pursue a tobacco free life.
It might also be worthwhile to reach out to artists, who feature substance use imagery and products in their musical content, and show them the implications of featuring substance imagery. Overall, public health practitioners could address the issue of associations between emotions and themes imagery and substance use or implied in order to prevent adolescents from substance use.
Figures

Figure 1. Google Spreadsheet that determined how many substances are portrayed and what emotions and themes they are associated with. Tabs are separated by video code number.

Figure 2. Excel Spreadsheet to calculate how many times a substance is portrayed and associated with emotions and content themes in each video. Tabs are separated by substances.
Figure 3. Sum of substance use imagery association with emotions and content themes in overall music videos. Tabs separated by substance use for unique graphs.

Graphs

Graph 1. Bar Graph of emotions and content themes associated with number of YouTube music videos of Alcohol Use and Implied Use
Graph 2. Bar Graph of emotions and content themes associated with number of YouTube music videos of Cigarette Use and Implied Use

Graph 3. Bar Graph of emotions and content themes associated with number of YouTube music videos of Large Cigar Use and Implied Use
Graph 4. Bar Graph of emotions and content themes associated with number of YouTube music videos of Cigarillo/Little Cuban Cigar (LCC) Use and Implied Use

Graph 5. Bar Graph of emotions and content themes associated with number of YouTube music videos of Hookah Use and Implied Use
Graph 6. Bar Graph of emotions and content themes associated with number of YouTube music videos of E-Cigarette/Vape Use and Implied Use

Graph 7. Bar Graph of emotions and content themes associated with number of YouTube music videos of Marijuana Use and Implied Use
Graph 8. Bar Graph of emotions and content themes associated with number of YouTube music videos of Lean Use and Implied Use

Graph 9. Bar Graph of emotions and content themes associated with number of YouTube music videos of Cocaine Use and Implied Use
References


dejloafVEVO. (2014, December 5). *Try Me* [Video File] Retrieved from https://www.youtube.com/watch?v=3Hn9hLOljJI


ILoveMakonnen. (2014, October 14). *Tuesday [Video File]*. Retrieved from https://www.youtube.com/watch?v=avFq9errZCk


