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## SMOKING PREVALENCE AND MEDIA IMPACT ON SMOKING BEHAVIORS AMONG ADULT LGBT PERSONS

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SMOKING PREVALENCE AND MEDIA IMPACT ON SMOKING BEHAVIORS AMONG  
ADULT LGBT PERSONS

by

Christina Tuell

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Masters in Science of Health Science  
Department of Health and Kinesiology

William Sorensen, Ph.D., Committee Chair

College of Nursing and Health Sciences

THE UNIVERSITY OF TEXAS AT TYLER  
December 2016

The University of Texas at Tyler  
Tyler, Texas

This is to certify that the Master's Thesis of

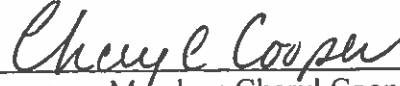
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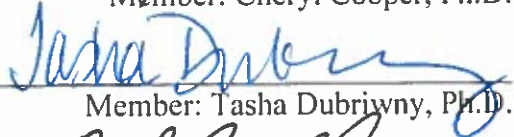
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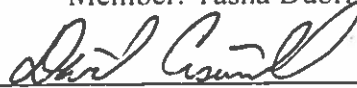
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## Dedication

I dedicate this thesis to those who have worked to improve the lives of the LGBT community.

“It takes no compromise to give people their rights... it takes no money to respect the individual. It takes no political deal to give people freedom. It takes no survey to remove repression.”

– Harvey Milk

## Acknowledgements

First I would like to thank Dr. William Sorensen, my thesis advisor and committee chair, for his amazing insight and support throughout the planning, research, and writing of this thesis. He encouraged me from the beginning to do a thesis and was there to guide me when needed. Dr. Cheryl Cooper provided valuable support and critiques during the collecting of data and the writing phases of this project. I will forever be thankful for the way she encouraged and empowered me to make the final edits my decision. Finally, I would like to offer my sincerest gratitude to Dr. Tasha Dubrwin, Associate Professor in the Department of Communication at Texas A&M University. I appreciate your willingness to serve on my committee and to challenge the ways in which I approached my research. Through words of encouragement and patience from the committee, the daunting task of a thesis became as simple as having a hunch, developing a way to test said hunch, and then writing an unknown number of drafts until this final completed version. There are not enough ways to say thank you to them.

I could not have completed my research without the support of the Health and Kinesiology Department. I will forever be grateful for not only the faculty and staff that have offered kind words and encouragement, but also the scholarships that were provided that allowed me to focus on my research.

On a personal level, I would like to thank everyone in the LGBT community who participated in my survey and the three research assistant who viewed almost 40 hours TV and movies. I certainly could not have accomplished this feat without you all. Additionally, I hope that my research provides some insight into the health behaviors of the LGBT community and encourages future research.

Lastly, I would like to extend a million thanks to those who supported me and helped shape this thesis (specifically Joshua Smith) despite the many unwritten rules (mainly with formatting) and hoops to get to the final product. The handling of procedure concerning style and guidelines led me once or twice to oppugn standards that have been sterling through my academic career.

“All young people, regardless of sexual orientation or identity, deserve a safe and supportive environment in which to achieve their full potential.” – Harvey Milk

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## **Abstract**

### **SMOKING PREVALENCE AND MEDIA IMPACT ON SMOKING BEHAVIORS AMONG ADULT LGBT PERSONS**

Christina Tuell

Thesis Chair: William Sorensen, Ph.D.

The University of Texas at Tyler  
December 2016

**Objective:** The purpose of this study is to explore the prevalence of Lesbian, Gay, Bisexual, and Transgender (LGBT) smoking prevalence and to identify possible associations between smoking behavior and depictions of smoking presented in visual media programming commonly viewed by these groups.

**Background:** Recent studies have shown there is a higher prevalence of smoking in LGBT communities (Tang et al., 2004). Approximately 17.8% of adults age 18 or older in the U.S. smoke cigarettes; while, 26.6% - 36.0% of LGBT persons smoke. The Big Tobacco industry has been known to intentionally target sub-groups of the general population, particularly minorities such as African Americans, youth, and the LGBT Community (Washington, 2002).

**Methods:** This thesis was implemented in two ways, a survey and media review analysis. The survey used gatekeepers to initiate a snowball technique to distribute the survey. The survey collected demographic information on sexual preference, behavioral habits, and knowledge of harms of smoking. The media analysis involved three research assistants who viewed eight movies and 24 TV shows produced in the last 5 years, tallying incidence and evidence of tobacco use.

**Results:** A total of 78 surveys were completed and 63 met the qualifications, over 18 years of age and was a part of the LGBT community either through self-identification, sexual attraction, or sexual behavior. Of the qualified survey participants, 30.8% were lesbian or gay, 30.8% were bisexual, 21.2% were pansexual, and 15.4% were heterosexual. Approximately 20.6% of participants were current tobacco users and 68.3% of participants had ever used tobacco. Overall LGBT media demonstrated marginally significant higher averages of tobacco incidence than mainstream media (6.98 n = 45 and 2.40 n = 45 respectively; T-Test  $p = 0.074$ ). There is little difference between tobacco incidence in movies versus TV shows (4.70 n = 23 and 4.69 n = 67 respectively). LGBT TV shows revealed a significantly higher average tobacco incidence than mainstream TV shows (8.71 n = 34 and 0.55 n = 33; Mann-Whitney = 0.003). However, surprisingly, the average tobacco incidence in LGBT movies was significantly lower than mainstream movies (1.64 n = 11 and 7.50 n = 12; Mann-Whitney = 0.011).

**Conclusion:** There is a higher rate of tobacco use in the LGBT community. The exact cause for the higher rates are unknown; however, (1) higher stress may induce more tobacco use, and (2) tobacco use in LGBT films could contribute to the increased rates. I uncovered evidence of higher tobacco use in LGBT TV shows, but the opposite in movies. However, I did observe a general trend of higher tobacco use overall in LGBT media. This is further evidence that tobacco companies may target sub-populations, such as the LGBT community. Education on this type of advertising is likely an effective way to counter the subtle targeting and raise awareness of tobacco use in sexual and gender minority populations. Healthy stress management education may also benefit this population.

## **Introduction**

Approximately 17.8% of adults' ages 18 or older in the U.S. smoke cigarettes ("Current Cigarette Smoking Among Adults in the United States," 2015). Southern states have a higher rate of cigarette smoking (19.2%) than the national average. Texas is between the national rate and southern rate at 18.0% ("Highlights - American Lung Association State of Tobacco Control 2015," 2015.). However, the national Lesbian, Gay, Bisexual, and Transgender (LGBT) population has a smoking rate of 26.6% to 30.6% ("Current Cigarette Smoking Among Adults in the United States" 2015; Jabson, Farmer, and Bowen, 2014). Gays and lesbians also exceed their heterosexual counterparts in the following areas: a history of drug use (30.8%), a history of marijuana use (72.9%), and a history of risky drinking (10.5%) (Jabson et al., 2014).

Documents like Project SCUM (subculture urban marketing) show how Big Tobacco intentionally targeted sub groups of the general population, such as African Americans, youth, and the LGBT Community (Washington, 2002). According to the Truth Initiative, formerly the Legacy Foundation, "smoking in youth-related films has a powerful impact on youth smoking initiation" (2010). Regardless of the tobacco product, whether cigarette, chewing tobacco, or electronic nicotine delivery system (ENDS), effective marketing is the best way to ensure an increase in customer base.

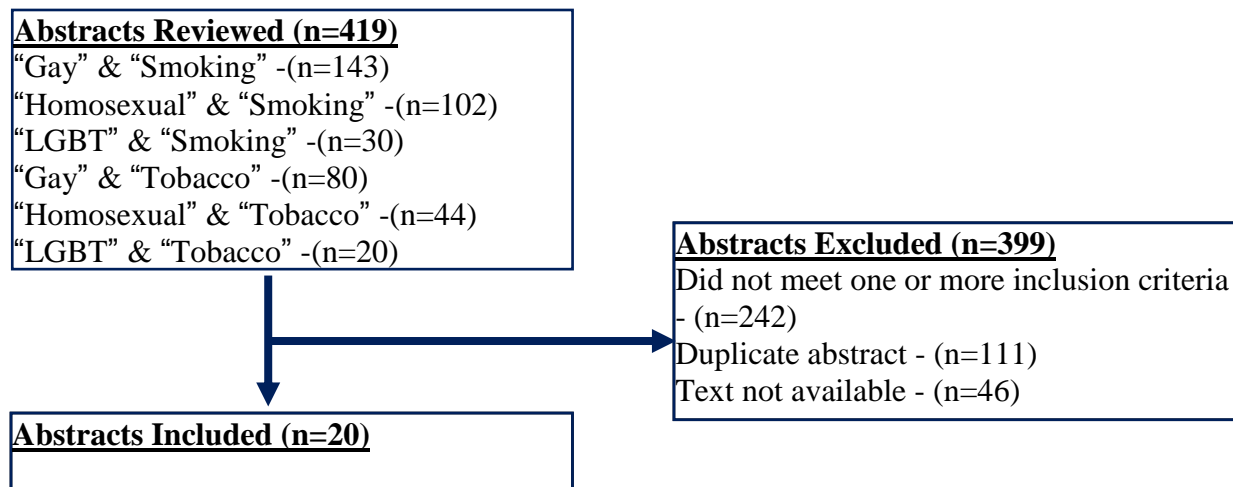
Two models will be explored in this study in an effort to explain the health behavior disparities in the LGBT community: the minority stress model and the behavior/attraction/identification theory. The minority stress model posits that being part of a minority group is associated with higher stress exposures. Behavior/attraction/identification theory includes a research field that classifies people based on who they have had sexual relations with or who they are attracted to (Schwartz, 2011).

This study has two aims (1) to determine the smoking rate of the LGBT community, and (2) to explore the relationship between the smoking rates in the LGBT community and the portrayal of the LGBT community and smoking behaviors in video media.

## Literature Review

### Introduction

A review of the available literature will help clarify the aims of this thesis. The literature review for this thesis grew out of a review for an attempted article submission to a journal. The article was to review tobacco use within the LGBT community. At first, review articles were selected by searching PubMed using a combination of keywords; such as, “gay” and “smoking”, “homosexual” and “smoking”, “LGBT” and “smoking”, “gay” and “tobacco”, “homosexual” and “tobacco”, and “LGBT.” In order to better identify current trends, practices, and smoking rates the search was restricted to publications in the past five years. Selected articles also had to (1) focus on the United States population, (2) be written in English, (3) have an available text, (4) partially or fully discuss the LGBT or sexual and gender minority population, and (5) discuss the prevalence of tobacco or smoking. Articles not meeting all selection criteria were excluded from review. The initial search resulted in 419 articles, 242 were excluded for not being written in English or not pertaining to the United States, 111 were excluded for being duplicate searches, and 46 did not have an available text. In total 20 articles were selected for review for an article submission (see Figure 1).



*Figure 1. Inclusion/ Exclusion Process.*



The LGBT acronym is often used as an umbrella term to cover more than lesbians, gays, bisexuals, and transgender persons. LGBT refers to the whole community of sexual and gender minorities. Some of the other sexual and gender minorities include: queer, questioning, asexual, pansexual, gender nonconforming, two spirit, and gender non-binary. The acronym can include any variation of LGBTQIAP but is often shortened to LGBT, its most recognizable form. This thesis will use variations of the LGBTQIAP to refer to specific communities or community groups as appropriate. For example, LGB may be used to refer only to those identified as lesbian, gay, or bisexual. Since gender identity and sexual orientation are not mutually exclusive, some researchers chose to only investigate specific subsets of the LGB community.

This chapter separates review articles into five categories: (1) Epidemiology, (2) Marketing and targeting, (3) Media portrayal, (4) Minority stress model, and (5) Behavior/attraction model.

## **Epidemiology**

Tobacco use is still the number one cause of preventable death in the U.S., causing over 480,000 deaths each year ("Health Effects of Cigarette Smoking," 2015). When determining which sub-populations are affected most by tobacco it is clear that the burden is not evenly placed across the general population. Many risk factors play a role in increasing the likelihood that a person will begin smoking, such as income, education, sexual orientation, gender identity, or race/ethnicity. For example, if one has a low income or has a low education level, one is more likely to smoke (Blosnich et al., 2013).

The current U.S. population exceeds 322,000,000 people (U.S. and World Population Clock, 2015), 9,000,000 (2.8%) of which are estimated to be LGBT (Gates, 2011). The state of Texas is home to over 25,000,000 people, with approximately 630,000 (2.5%) LGBT residents ("State Policy Profile - Texas, 2015"). The estimates of the LGBT population vary from 3%-

30%; the Gallup Daily Tracking Data for 2015 has the LGBT population at 3.8% (Newport, 2015)<sup>1</sup>.

Now, approximately 17.8% of adults 18 years old or older in the U.S. smoke cigarettes ("Current Cigarette Smoking Among Adults in the United States," 2015). The current number of cigarette smokers is on a downward trend; in 2005, 20.9% of U.S. adults aged 18 or older smoked cigarettes ("Current Smoking Among Adults in the United States," 2015). Southern states have a higher rate of smoking cigarettes (19.2%) than the national average. Texas is between the national rate and southern rate at 18.0% ("Highlights - American Lung Association State of Tobacco Control 2015," 2015.). However, the national LGBT population has a smoking rate of 26.6% - 36.0% ("Current Cigarette Smoking Among Adults in the United States," 2015).

Consistently, studies have shown that there is a higher prevalence of smoking in LGBT communities compared to their heterosexual counterparts. One study shows that LGBT smoking prevalence is two times higher than in heterosexual communities ("Center Facts: Smoking and the LGBT Community"). In a 2004 study, gay men were found to be 50% more likely to smoke and lesbians were up to 70% more likely to smoke when compared to heterosexual men and women (Ong and Glantz, 2004).

Matthews and Lee (2011) outlined the health disparities among LGB North Carolinians. Their work determined that members of the LGB population experienced poor mental health in 34.9% of gay or bisexual men, and 47.9% of gay or bisexual women, whereas poor mental health was found in 15.9% of heterosexual men and 24.0% of heterosexual women. Women, regardless of sexual orientation, had a higher likelihood of being a smoker or a former

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<sup>1</sup> A count of the LGBT population is not exact due to the many variables in identifying members of the LGBT community. Those variables can include: method of survey, how "out" or open an individual is, fluidity of sexuality, and the criteria used to define the LGBT community.

smoker than men, therefore lesbian or bisexual women had the highest current smoking rate (33.6%) and heterosexual men had the highest former smoker rate (32.2%) (Matthews and Lee, 2011). Due to the fact that North Carolina, like most Southern states, does not have policies aimed at the protection of LGB persons in the workplace and the lack of recognition of same-sex partners on health insurance plans, this subpopulation often receives less access to healthcare and health insurance. For example, North Carolina is also facing scrutiny over the Public Facilities Privacy and Security Act (HB2) that was passed on March 23, 2016. HB2 sought to regulate single-sex multiple occupancy bathrooms and changing facilities in schools and public agencies for statewide consistency. HB2 goes on to define biological sex and “the physical condition of being male or female, which is stated on a person’s birth certificate”. This bill targets the transgender population by stating “Public agencies shall require every multiple occupancy bathroom or changing facility to be designated for and only used by persons based on their biological sex” (North Carolina House of Representatives House Bill DRH40005-TC-1B, 2016). Currently in North Carolina, a person must undergo sex reassignment surgery in order to have their birth certificate altered. Several artists, performers, and athletes chose not to perform or play in North Carolina due to this controversial legislation. Many in the LGBT community, including LGBT allies, felt this bill intentionally discriminated against the transgender and other non-binary gender populations. On May 9, 2016 the U.S. Department of Justice sued North Carolina Governor Pat McCrory along with the North Carolina Department of Public Safety and the University of North Carolina System. The lawsuit states HB2 is a violation of Title VII of the Civil Rights Act, Title IX of the Education Amendments of 1972, and the Violence Against Women Act (CNN, 2016). HB2 also originally attempted to eliminate anti-discrimination laws for the LGBT community. This type of governmental action against the LGBT community

illustrates continued discrimination against those who are not within the heteronormative binary, partially attributing to worse health outcomes for members of the LGBT community.

One study utilized the National Health and Nutrition Examination Survey to determine the relationship between stress, sexual orientation, and smoking (Jabson et al., 2014). This study showed that there was a higher prevalence of smoking and substance abuse among the LGB community (Conron, Mimiaga, and Landers 2010; Jabson et al., 2014). Specifically, bisexuals have the highest rates of being current smokers (41.4%), a history of drug use (41.3%), a history of marijuana use (79.7%), and a history of risky drinking (17.5%). That said, gays and lesbians also exceed their heterosexual counterparts in the following areas: current smoker (30.6%), a history of drug use (30.8%), a history of marijuana use (72.9%), and a history of risky drinking (10.5%) (Jabson et al., 2014). Due to the higher rates of smoking and substance abuse, it is most likely that members of this subpopulation will experience greater health risks in the future (Conron et al., 2010).

It is important to recognize that there are sub-groups within the LGBT community as well. Fredriksen-Goldsen and Kim (2013) evaluated Hispanic lesbians and bisexual women using data from the Washington State Behavioral Risk Factor Surveillance System (BRFSS). Within this research, it was determined that Hispanic women who are LGBT are at a higher risk for diseases like arthritis, asthma, drinking, and mental stress or anguish. The authors also noted that Hispanic lesbians more frequently indicate asthma issues than their non-Hispanic White counterparts, and Hispanic bisexuals are more likely to indicate more frequent mental distress than their non-Hispanic White counterparts. Additionally, another study utilizing the same data to identify health disparities in LGB adults, aged 50 and older, determined that this population had a higher risk for poor mental health, disability, smoking, and drinking

(Fredriksen-Goldsen et al., 2013). This research also showed that gay men have a higher rate of smoking (20.0%) than their lesbian and bi-sexual women counterparts (18.3%) and they also had a lower rate of overall education (14.6%) as well.

Two of the reviewed publications discussed tobacco usage and health risks among LGB veterans. Both of these studies accessed various BRFSS records in order to determine that sexual minorities were at a higher risk for mental distress and smoking (Blosnich et al., 2013a; Blosnich and Silenzio, 2013b). Blosnich et al. determined that 34.0% of lesbian or bisexual veterans were current smokers. Additionally, it was determined that lesbian and bisexual veterans experienced a higher amount of mental distress (42.3%) than their non-veteran lesbian/bisexual (25.7%) or heterosexual (17.1%) veteran counterparts (Blosnich et al.,). According to Blosnich et al., lesbian, gay, and bisexual veterans showed a higher smoking rate (21.0%) than heterosexual veterans (14.6%) and more of them also reported having poor physical health (19.5%) than heterosexual veterans (15.2%). In another study, it was determined that smoking among the LGBT population had a significantly higher smoking rate (38.5%) than heterosexual/straight (25.3%) respondents (King, Dube, and Tynan, 2012). Additionally, King et al. (2012) illustrated that as education levels raise, smoking rates decrease. Thirty-five and a half percent of respondents without a high school diploma or GED were classified as smokers, but only 14.2% with an undergraduate degree and 9.6% with a graduate degree were smokers.

### **Marketing and Targeting**

Across all populations, regardless of sex or race, smoking often begins before the age of 21 (Smoking Out a Deadly Threat: Tobacco Use in the LGBT Community, 2010). Exposure to smoking in media has been credited as a catalyst for adolescent smoking initiation (Smoking in the Movies, 2010). Big Tobacco has been known to intentionally target sub groups of the general population, such as African Americans, youth, and now the LGBT Community (Washington,

2002). According to the Truth Initiative, “smoking in youth-related films has a powerful impact on youth smoking initiation” (2010). A consequence of the 1998 Tobacco Masters Settlement Agreement was that Big Tobacco was restricted from researching marketing techniques for youth and directly advertising to them. However, like many minority groups, the tobacco companies are still targeting the LGBT community. Commonly used targeting media are magazines, movies, and TV shows.

However, a loophole exists whereby Big Tobacco can indirectly market to youth by way of media that have an official target audience of adults. For example, Sports Illustrated (SI) has an official target audience of adults age 18 and over. Yet SI has made a youth oriented magazine, Sports Illustrated Kids, that has a target audience of ages 8 to 15 ("Sports Illustrated for KIDS: Readership and Circulation" 2015). The actual readership of SI has 1.6 million teen readers ("Now on Newsstands: Is it Sports Illustrated' Swimsuit or Tobacco Issue? - Campaign for Tobacco Free Kids" 2015). On average there are two to four tobacco advertisements in a regular edition of SI, possibly more in a special edition like the most popular Swimsuit Edition. The 2015 Swimsuit Edition had seven tobacco ads: two cigarette brands, three smokeless tobacco, and two electronic cigarettes ("Now on Newsstands: Is it Sports Illustrated' Swimsuit or Tobacco Issue? - Campaign for Tobacco Free Kids" 2015).

While traditional tobacco has been banned from various advertising options the newer products, like ENDS and hookah, do not have any restrictions or Food and Drug Administration (FDA) regulations (Durbin et al., 2014). An analysis of recent marketing of ENDS has shown similar tactics as used by Big Tobacco prior to the settlement (Campaign for Tobacco Free Kids, 2013). During 2011-2012 alone, ENDS makers almost tripled their annual advertising expenditures, from \$6,400,000 to \$18,300,000 (King et al., 2015). With an increase in

advertising spending and the use of known, successful marketing tactics ENDS companies are reaching more people and increasing their customer base. In 2014, 12 U.S. Senators launched an investigation into marketing practices of nine commonly sold ENDS brands. The investigation committee made several recommendations including: age restrictions, advertising, and warning label regulations and uniformity. For example, the committee recognized that tobacco and ENDS are detrimental to the health of young people, therefore it was suggested that the FDA make regulations to restrict the sale of ENDS to persons under the age of 18. Furthermore, the FDA should also regulate the content and production of ENDS in order to assure uniformity in safety and content. Finally, the report suggested that the FDA limit the advertising to, and sponsorship of, youth related activities by ENDS manufacturers (Durbin et al., 2014).

Regardless of the tobacco product, effective marketing is the best way to ensure an increase in customer base. New regulations of ENDS show the makers are following the path of Big Tobacco by targeting subpopulations like LGBT and African Americans. For instance, both Big Tobacco and ENDS support LGBT Pride events across the nation. Furthermore, due to the lack of regulation, ENDS companies participate in the Pride festivals and often offer free samples of their products.

### **Media Portrayal**

The group GLAAD is a nongovernmental organization that evaluates the portrayal of the LGBT community in media. In 2013 GLAAD launched the Studio Responsibility Index (SRI). The SRI serves to evaluate top grossing movie studios on their portrayal of the LGBT community in the previous year. GLAAD also developed the Vito Russo test to evaluate the quality of the LGBT character (“2014 Studio Responsibility Index,” 2014).

In 2014 GLAAD evaluated seven studios and 114 films. Of the 114 films 17.5% identified as LGBT, a slight increase from 2013 (16.7%) (“2015 Studio Responsibility Index,”

2015). In the 2014 LGBT film evaluation there were exactly 28 LGBT characters, some receiving as little as 30 seconds of screen time (“2015 Studio Responsibility Index,” 2015). The majority of representation came from gay males (65%), then bisexuals (30%), lesbians (10%), but with no representation of the transgender community. The number of movies with LGBT representation has increased every year since 2012 (13.8%, 16.6% and 17.5% respectively), the number of characters that pass the Vito Russo test also has increased (42.8% 2012, 41.1% 2013, and 55.0% 2014) (“2015 Studio Responsibility Index,” 2015). This shows that society’s portrayal of LGBT persons is more and more trusting and accepting.

Complete quality representation of the LGBT community is lacking in media but real representation in the indie film market is rising. At the 2014 Sundance Film Festival Lance Bass, an openly gay former N’Sync member, said “They’re telling stories about LGBT members that happen to be gay, instead of making the film all about being gay” (Sinha-Roy, 2014). While this may seem like a trivial comment, GLAAD’s primary suggestion every year is to stop negatively portraying the LGBT community and stop trying to inadvertently make them the butt of a joke (“2015 Studio Responsibility Index,” 2015). The awareness and proper representation of the LGBT community through well-developed LGBT characters in media helps to normalize and educate the mainstream population on the LGBT community.

From 2002 to 2014 the number of tobacco incidents (the occurrence of smoking or other tobacco use in a movie) per movie increased from 21% to 38% (“Smoking and Tobacco Use; Fact Sheet; Smoking in the Movies,” 2015). By contrast, tobacco depiction in youth oriented films has decreased with 32% smoke-free in 2002 to 64% smoke-free in 2014 (“Smoking and Tobacco Use; Fact Sheet; Smoking in the Movies,” 2015). In 2012 the Surgeon General announced that exposure to onscreen smoking increases the smoking rate in youth,



recommending in 2014 to change the rating of a movie to R due to smoking scenes, which could decrease the smoking rates in youth by 18% (“Smoking and Tobacco Use; Fact Sheet; Smoking in the Movies,” 2015). The Entertainment Industry Council (EIC) has also spoken up and encouraged film makers to determine if smoking is necessary or just scenery because they want more realistic portrayals of smoking (Gilbert, 2014). The Global Media Center for Social Impact at the University of California (Los Angeles) has partnered with screen writers and film makers to send positive and accurate public health messages (“Is showbiz good for your health?,” 2015). They often link experts with screen writers to help verify content and occasionally inspire stories about public health issues (“Is showbiz good for your health?,” 2015). There is currently no data on the rate of smoking among LGBT characters in film or TV.

### **Minority Stress Model**

The minority stress model posits that being part of a minority group is associated with higher stress exposures. Minority status can be defined through several factors including: race, sexual orientation, gender identity, education level, or socioeconomic status. This thesis will focus on sexual orientation as a minority status. Stressors can include discrimination, violence, prejudice, difficulty and challenges in social, housing, employment, or other settings. Prejudice can make it harder to find and maintain health care. According to Blosnich and Horn (2011), sexual minorities experience a higher rate of being victims of violence and discrimination. For example, of the LGB participants studied in their research, 14.5% reported experiencing physical assault, but only 5.3% of the heterosexual population also experienced physical assault. When it comes to sexual assault, 27.5% of gays, lesbians, or bisexuals reported abuse, but only 7.9% of heterosexual respondents reported abuse. The relationship between violence and smoking in minority groups may be connected, such that, as stress or depression increases so does smoking (Blosnich and Horn, 2011).

The minority stress theory states that the stress, depression, and anxiety associated with being a member of the LGB community leads to an increase in tobacco usage (Blosnich and Horn, 2011). According to Lindley et al. (2012), adults with an LGB identity have higher rates of mood or anxiety disorders than heterosexuals, perhaps due to more stress.

## **Behavior, Attraction, and Self-Identification Model**

### *The Problem*

Minority populations under the lens of race have clear operational definitions in that one either is or is not. By contrast, since there are multiple ways to identify the minority LGBT population it is harder to get consistent or accurate information, which can make it a challenging task to work with this population or compare results from one study to the next. For example, not all men who have sex with men identify as homosexual or bisexual. Sexual and gender minority groups, (possibly because of the influence of surrounding communities), may or may not identify as LGBT based on their actions, presenting a unique challenge to researchers. For example, some racial and religious communities are less tolerant and accepting of a person coming out.

Describing and identifying underlying sexual paradigms can be important in interpreting something as simple as smoking behavior. Smoking prevalence can differ depending on how a researcher identifies the LGBT or sexual and gender minority. These variations may cause alarm because a rate seems much higher than expected, or cause a false sense of security because a rate appears lower. If a researcher only uses the self-identify paradigm in studying smoking patterns, then an entire subpopulation of an assumed group could be left out. On the other hand, if the researcher embraces the behavior/attraction paradigm then the researcher runs the risk of misidentifying the participant's sexual orientation.

Until 2009, there were no guidelines to address this for researchers who were interested in studying subpopulations based on sexual orientation ("Best Practices for Asking Questions

about Sexual Orientation on Surveys"). Therefore, it is challenging to interpret information on these subpopulations when national or regional surveys ask a blanket statement about sexual orientation or preference. Sexual orientation questions often ask the respondent if they are heterosexual, gay, lesbian, and sometimes bisexual; by limiting sexual orientation to these terms it forces the respondents to choose one that might not fit. The wording of the questions varies by location and sometimes by time, the differences in the wording may also make it difficult to compare the results from survey to survey (The Fenway Institute, 2013). For example, 25 states in gathering BRFSS information asked about sexual orientation or sexual behavior, nine states asked both, five states asked about sexual behavior, 11 states asked about sexual identity, 18 states did not include sexual orientation, and seven states did not have information available (The Fenway Institute, 2013).

Behavior/attraction/identification theory includes a research field that classifies people based on who they have had sexual relations with or who they are attracted to (Schwartz, 2011). In a behavior/attraction paradigm a person can be a heterosexual female that sleeps with women, but this person does not identify as a lesbian or bisexual. However, a self-identification categorization is based on a person's decision to identify as LGBT regardless of his/her past sexual partners. See Appendix A for a complete list and definitions of terms pertaining to this theory.

### *Self-Identification*

In articles that used self-identification as the primary method of determining sexual orientation, some key issues were repeatedly emphasized. One such issue is the anomaly with bisexuals. According to Bennett et al. (2015) persons who identify as gender or sexual minorities had a higher rate of smoking. However, those identified as bisexual and transgender had significantly higher rates of smoking when compared to gay, lesbian, or heterosexuals

(45.0% and 51.6% respectively). Furthermore, they found that illegal substance abuse was lower in individuals who identify as bisexual than persons who identify either as gay or lesbian, and higher in those with bisexual behavior but do not identify as bisexual. No clear reasons could be identified for these behavior disparities (Bennett et al., 2015).

Of the 15 articles reviewed here that utilized self-identification for sexual orientation, there were eleven that also evaluated the health risks associated with and without smoking, in the LGBT community. One idea explains a higher risk because self-identified members of sexual minority orientation have less access to health care and health services. Many members of the LGBT community reported limited access to health care due to lack of insurance coverage or delaying medical attention due to fear of discrimination among health care professionals (Stotzer, Ka'opua, and Diaz, 2014). The less access to health care can have a large impact on a person's overall health. Currently there is not data available pertaining to the impact of smoking related illness, such as lung cancer, heart disease, and stroke, specifically in the LGBT community.

One research team admitted that it is not clear why members of the LGB community participate in more tobacco usage, but they theorized that it highlights a social setting that is a combination of historical use of tobacco in bars and the popularity of bars as a meeting place for the LGBT community and civil rights movement (Lee, Goldstein, Ranney, Crist, and McCullough, 2011).

Lastly, Corliss, Wadler, Jun, Rosario, Wypij, Frazier, and Austin (2012) conducted a study which targeted youth from the ages of 12 - 24. Their research determined that LGBT youth started smoking at a younger age and because of this were more likely to be addicted current smokers than heterosexual youth.

### *Behavioral & Attraction Identification*

When researching the LGBT community, it is important to understand and evaluate how a person perceives themselves within the community and the world around them. As a result, it is important to recognize that not all people will automatically self-identify as gay, lesbian, bisexual, or transgender. For example, three studies (Lindley et al., 2012; Przedworski, McAlpine, Karaca-Mandic, and VanKim, 2014; Stotzer et al., 2014) asked people about their sexual attraction or the genders of their past or current sexual partners. Their responses revealed a clearer meaning when determining tobacco usage among the LGBT community. According to Przedworski et al. (2014), for example, heterosexual women who have sexual relations with women reported a higher rate of poor self-rated health than lesbians (17.1% and 16.1% respectively). Furthermore, heterosexual women who have sex with women (16.8%) had a much lower rate of not having access to health insurance versus lesbians (29.5%) and bisexuals (26.7%). Finally, heterosexual women who have sex with women indicated a higher lifetime use of cigarettes (72.6%) when compared to lesbians (56.1%) and bisexuals (66.8%). This study suggested that it is vital to understand behaviors as well as self-identification because data could potentially be biased when only relying upon self-identification.

### **Discussion**

Across the U.S. LGBT persons are currently gaining rights and recognition. As states begin to accept and acknowledge the rights of the LGBT community, the data on sexual orientation and existing health disparities continue to roll in. The June 2015 Supreme Court ruling, *Obergefell v. Hodges*, made same-sex marriage legal nationally; this could be the motivational push that increases the health research and knowledge of the LGBT community.

Throughout this chapter it has been shown that members of the LGBT community are at greater risk for tobacco usage and consequent health problems. On the other hand, it has also

been determined that in places that have stronger or more restrictive tobacco policies, or in settings where the media is transparent or regulates advertising, there are fewer youth or LGB persons who smoke (Hatzenbuehler, Keyes, Hamilton, and Hasin, 2015). The next chapter, methods, outlines what I did in order to answer the aims.

## **Methods**

### **Participants**

#### *Gatekeepers*

Gatekeepers are leaders in a specific community. Often they are well known and respected. Gatekeepers to the LGBT community were identified as the starting point for one of the two parts of data collection, the survey. These self-identified LGBT persons or advocates were picked as gatekeepers through LGBT groups like Tyler Area Gays (TAG) and college based Gay Straight Alliances (GSA).

#### *Survey Participants*

Participants were found through Gatekeepers. The Gatekeepers were encouraged to email a survey link to their peers or community organization members. The survey sought to identify sexual minority persons based on sexual self-identification, or behavior and attraction, but it was not limited to only known LGBT persons. Gatekeepers were reminded to resend the survey link every two to three weeks during the twelve weeks the survey was active. The index LGBT community is relatively small; therefore, snowball sampling (Patton, 1990) was the most efficient way to build the numbers of survey participants.

#### *Media Tally*

The other part of the data collection for this thesis was a media tally. A team of three researcher assistants, comprised of university students from the Health and Kinesiology Department, were trained to evaluate tobacco incidents in movies and TV shows. The research Assistants underwent IRB training and a two part media training. The first part of the media training introduced the research assistants to the components of this thesis, their role, different forms of tobacco, brief images of smoking in movies, terminology and definitions of the LGBT community, and practice with four clips from movies to help identify LGBT characters. The four

clips portrayed gay characters and gay actors playing heterosexual roles. The second training consisted of watching fourteen clips from movies and TV shows. The researcher assistants practiced counting tobacco use and identifying characters' sexual orientation. Upon completion of the trainings the researcher assistants were given the media list, tally sheets, and log in information for the needed streaming services. Demographic information was collected from the research team.

## **Data Collection**

### *Survey Tool*

The survey relied on convenience sampling. An invitation to the survey was sent out via email and Facebook. The electronic survey link was dispersed to ten gatekeepers using snowball sampling (Patton, 1990). Each person that agreed to take the questionnaire was encouraged to pass it on to five to ten others (family, friends, or acquaintances). Every two weeks the survey link was resent to gatekeepers as a reminder. The timeline for the survey was May 1st to July 31st, 2016. Seventy-eight completed and partial questionnaires were collected.

The survey collected demographic information, sexual preference, smoking behavior, stress, media, and openness components. These six categories comprised 54 total questions. There were seven demographic (questions 1-7), seven sexual orientation (questions 8-14), seven movie/media (questions 15-21), twenty smoking (questions 22-41), five stress (questions 42-46), and eight engagement/openness (questions 47-54) items (see Appendix B for questionnaire). One of the engagement/openness questions included four sub questions from Davis (1998). The reliability of the responses from this section was .74 (Davis, 1998).

### *Media Tally Sheet*

The movies were divided into two categories (general public (mainstream) and LGBT), and into two genres (drama and comedy). Four movies from each category, two from each genre,

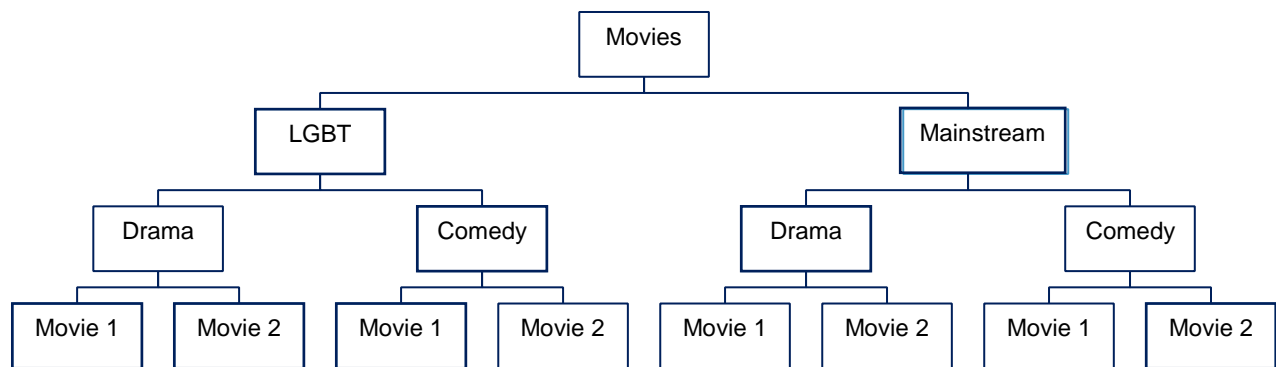


were randomly selected for a total of eight viewings (See Figure 2). For the purpose of this thesis a television (TV) show was defined as “a segment of content intended for broadcast on TV, other than a commercial, channel identifier, trailer, or any other segment of content not serving as attraction for viewership” (“Television program,” 2016). Netflix original series were also included in the list of possible shows. The TV segment included three episodes of four TV series that were chosen at random from the same categories and genres, for a total of twelve viewings (see Figure 3). The media was reviewed for smoking associations in two ways: tobacco incidence (a person actually smoking) and tobacco evidence (any indication of cigarettes or references to cigarette packs, ash trays, butts, etc.). See Appendix C for the media reviewer tally sheet.

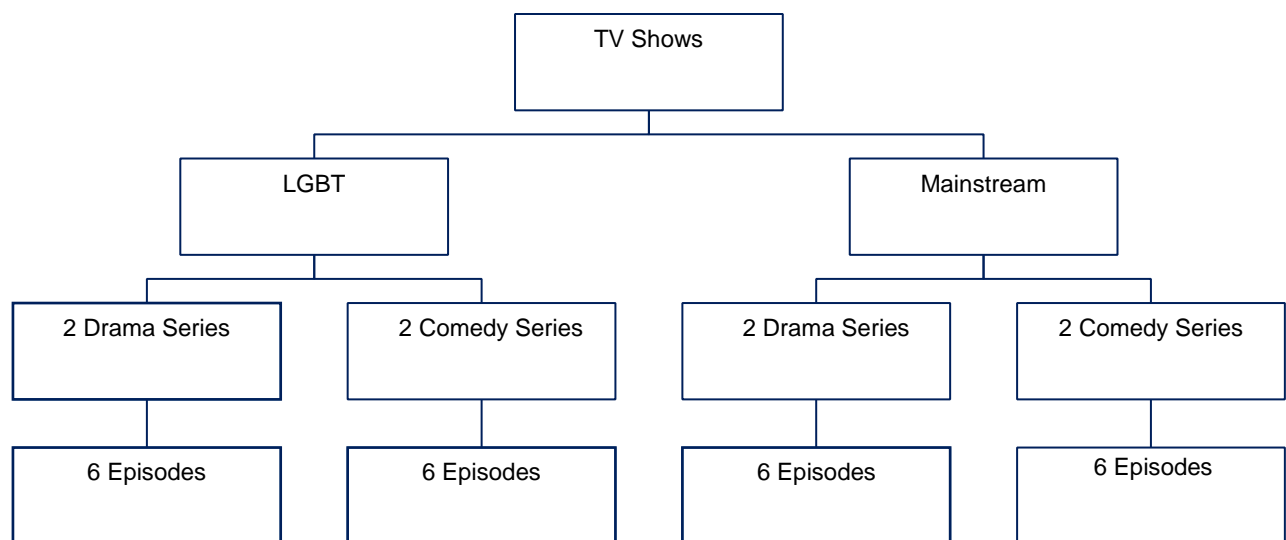
For Netflix movies two genres and two sub-genres (Comedy, Drama, LGBT Comedy, LGBT Drama) were used to compile the list of movies. The criteria for movies were as follows: Had a Netflix rating of two or more stars, not have been a stand up or live show, and aired between 2010 and 2015. The final list of movies was composed of 324 comedies, 417 dramas, 22 LGBT comedies, 57 LGBT dramas.

The list of LGBT TV shows was compiled using the GLAAD Award Nomination list. The TV show nominees for 2011 - 2016 comedy and drama categories were used as a guide. The TV show had to be available to stream on Netflix, HBO Go, or Hulu to be considered. The list consisted of twelve LGBT comedies and fourteen LGBT dramas. The list of Mainstream TV shows was compiled using shows aired for either two seasons or twenty-two episodes on one of the five major networks (ABC, CBS, NBC, The CW, and Fox). The mainstream shows were categorized using the Internet Movie Database (IMDb) for genre. All shows listed as comedy and drama were put into both the comedy and drama lists. The final list for mainstream TV

consisted of 61 drama shows and 38 comedy shows.



**Figure 2. Movie Selection Breakdown**



**Figure 3. Television Show Selection Breakdowns**

The selection of media from the movie and TV list was random. Qualified titles were compiled and then titles were selected for reviewing by a third party using systematic randomization. Assistants also recorded the perceived message regarding tobacco use, the choices were, sexy, fun, celebration, wealth/power, cool, independent/unique, habit/addiction, rebellion, loser, neutral, tension/stress, relaxation, and other. The media training and tally form were developed with inspiration from the Thumbs Up Thumbs Down E Program Manual produced by Breathe California of Sacramento-Emigrant Trails.

## **Analysis**

### *Survey*

Only the results from self-identified and behavior or attraction identified LGBT persons were included into the data from the survey. Self-identified and behavior or attraction identified LGBT persons were analyzed as two separate categories. Descriptive statistics were done. Analytical statistics included Chi Squares and Fishers Exact Tests for categorical data, and T-Test or ANOVA for continuous data.

### *Media*

The means of the tally for tobacco incidence and tobacco evidence were computed. Comparisons between categories and genres were scrutinized. The inter-rater reliability for tobacco incidence was lower than expected at 0.63. The inter-rater reliability for tobacco evidence was low at 0.39.

### *Incorporating Both Components*

The ancillary goal of this thesis is an attempt to find patterns across the two parts of data generation.

### *Consent and Approvals*

The University of Texas at Tyler's Institutional Review Board ethically evaluated this study. Consent was given and collected for both study components (Appendix D). All three research assistants completed IRB training prior to reviewing any media.

## **Results**

### **Survey Findings**

A total of 78 surveys were completed online and 63 were analyzed. To be included in data analysis a participant had to be 18 years or older and had revealed a self-identified sexual orientation, sexual behavior identified, or attraction identified member of the LGBT community. Fifteen participants were excluded, two for age <18 years and 13 for failing to meet the sexuality qualifications. Of the 21 who self-identified as heterosexuals, eight (38.1%) were behavior or attraction identified LGBT community members.

The mean age of participants was 30.4 year (range: 19 - 56). A majority of participants were white non-Hispanic (86.5%). While over half of the participants currently resided in Texas, more than half were not originally from Texas (59.2% and 55.1%). A majority (64.7%) of participants had a college degree. Of the current tobacco users 76.9% were college graduates. Ever tobacco users also had a high college graduation rate (70.5%). Current tobacco users indicated they were currently using one or more tobacco product; such as, cigarettes, cigars, dip, or ENDS. Ever tobacco users indicated they were currently or had previously used one or more tobacco products. See Appendix A for other breakdowns in the data.

Less than half (42.6%) of respondents were assigned male at birth, 55.6% were assigned female at birth. Gender identity was diverse: 32.0% male, 46.0% female, 4.0% gender queer, 10.0% transgender female, 6.0% transgender male, and 2.0% two spirit. In terms of sexual preference there were: 30.8% bisexual, 21.2% pansexual, 15.4% heterosexual, 15.4% lesbian, 15.4% gay, and 1.9% queer. Fewer than half of participants were currently engaging in sex with someone of the same sex; however, 77.6% have had sex previously with someone of the same sex. When asked about same sex sexual attraction, all of those who responded reported that they were attracted to members of the same sex (100%).

The majority (66.7%) of participants had ever smoked, while only 21.4% currently smoked cigarettes. The prevalence of other type of current tobacco use was lower: cigars 9.8%, dip 0.0%, and ENDS 12.8%. As expected, a higher prevalence is reported for “had ever used” other tobacco products: cigars 36.6%, dip 10.3%, and ENDS 51.3%. The average age of current tobacco users is 29.7 years whereas the current age of ever tobacco users is 31.5 years.

	Total		Current Tobacco User		Ever Tobacco User	
	n	%	n	%	n	%
<b>Age</b>						
Younger (19 - 27)	27	50.0%	7	53.8%	19	46.3%
Older (28 - 56)	27	50.0%	6	46.2%	22	53.7%
<b>Race/Ethnicities</b>						
White	45	86.5%	10	76.9%	37	84.1%
Minority	7	13.5%	3	23.1%	7	15.9%
<b>Education</b>						
No College Degree	18	35.3%	3	23.1%	13	29.5%
College Degree	33	64.7%	10	76.9%	31	70.5%
<b>Residence</b>						
Texas	29	59.2%	9	30.8%	25	59.5%
Outside of Texas	20	40.8%	4	69.2%	17	40.5%
<b>Gender Identity</b>						
Male	16	32.0%	4	30.8%	14	32.5%
Female	23	46.0%	7	53.8%	20	46.5%
Transgender	8	16.0%	1	7.7%	6	14.0%
Other	3	6.0%	1	7.7%	3	7.0%
<b>Sexual Orientation</b>						
Lesbian or Gay	16	30.8%	4	30.8%	12	29.6%
Bisexual	16	30.8%	5	38.5%	10	22.7%
Pansexual	11	21.2%	2	15.4%	8	18.2%
Heterosexual	8	15.4%	2	15.4%	13	29.5%

**Table 1. Demographics & Smoking Status (n, %)**

Participants who identified themselves as outside of the gender binary (they do not fit within the male and female dichotomy) had a current tobacco use rate of 15.4%. More than half

of the participants who currently engaged or have engaged in same sex sexual behaviors were current tobacco users (53.8% and 84.6% respectively).

Approximately 21.0% of those outside of the gender binary had ever used tobacco. Less than half (40.9%) of those currently engaging in same sex sexual behaviors had ever used tobacco whereas more than two-thirds (68.2%) of those who had engaged in same sex sexual behaviors had ever used tobacco. While all of the current tobacco users reported being attracted to the same sex (100%), fewer were ever tobacco users (84.1%). See Table 2 for other breakdowns in the data.

TV was rated with a higher importance in participants' lives than movies (69.1% vs. 54.8%). More than half of the participants outside of the gender binary reported that TV and movies were important in their lives (72.8% TV and 63.6% movies). Among the LGB participants 55.9% reported that movies were important and 67.7% reported TV. Transgender participants found both movies (63.6%) and TV series important (72.8%). Participants who identified as heterosexual and had either same sex sexual attraction or same sex sexual behavior also found movies and TV series to be important (50.0% and 75.0% respectively). Among current tobacco users 61.6% found movies were important and 77.0% found TV was important in their lives. The rates were similar for ever tobacco users, 59.1% found movies important and 70.4% found TV important.

Participants were shown a list of 32 movies (16 LGBT and 16 mainstream) and asked to select which movies they had seen in the last five years. The research assistants, from the second part of this study, analyzed eight of the sixteen movies (4 LGBT and 4 mainstream); they were reviewed for tobacco incidence and evidence. Of the four LGBT media reviewer movies nine survey participants indicated they had seen any of them. Of the four mainstream media reviewer

movies, eight survey participants indicated they had viewed any of them. Thirty-one survey participants reported seeing the other twelve LGBT films that were not reviewed for tobacco use and 25 survey participants reported viewing the mainstream movies.

	Current Tobacco		Former or Non Tobacco Users		P-Value <sup>† †</sup>	Ever Tobacco		Non Tobacco User		P-Value <sup>† †</sup>
	n	%	n	%		n	%	n	%	
Gender Identity										
Cis-Gender	11	23.4%	28	59.6%	0.66	27	57.4%	12	25.5%	1.00
Transgender	1	2.1%	7	14.9%		6	12.8%	2	4.3%	
Cis-Gender	11	22.0%	28	56.0%	0.7	27	54.0%	12	24.0%	0.71
All Other Gender Identities	2	4.0%	9	18.0%		9	18.0%	2	4.0%	
Sexual Orientation										
Heterosexual	2	3.8%	6	11.5%	1.00	6	11.5%	2	3.8%	1.00
LGB+	11	21.2%	33	63.5%		31	59.6%	13	25.0%	
LGQ	4	9.1%	13	29.5%	1.00	13	29.5%	4	9.1%	0.49 <sup>†</sup>
BP	7	15.9%	20	45.5%		18	40.9%	9	20.5%	
Age										
Younger (19 - 27)	7	13%	20	27.0%	0.75 <sup>†</sup>	15	27.8%	12	22.2%	0.15 <sup>†</sup>
Older (28 - 56)	6	11.10%	21	38.9%		20	37.0%	7	13.0%	
Race/Ethnicities										
White	10	19.20%	35	63.7%	0.35	30	57.7%	15	28.8%	.09*
Minority	3	5.80%	4	7.7%		7	13.5%	0	0.0%	
Education										
No College	3	5.90%	15	29.4%	0.34	11	21.6%	7	13.7%	0.2
College Degree	10	19.60%	23	45.1%		26	51.0%	7	13.7%	

<sup>†</sup> Chi Square Test

<sup>† †</sup> Fishers Exact Test

\*Marginally Significant P <0.10

**Table 2. Tobacco Use status by Gender Identity / Sexual Orientation (n, %, P-value)**

In an average week, survey participants reported an average stress level of 7.3 on a 1 (low) to 10 (high) scale (range: 4 - 10). A large majority of participants found employment was a stressor (90.9%). This is followed (in order of high to low stress level) by paying bills (85.5%), lack of acceptance (69.7%), school (68.4%), raising children (62.6%), getting through the day (62.1%), and preparing food (50.0%), as stressors for the majority. Commuting, living with a partner, living with parents, experiencing violence directed against themselves, shopping, and general discrimination were also stressors for some (48.6%, 41.6%, 37.6%, 30.7%, 29.7%, and

23.6% respectively).

There was a significant difference in stress between younger and older survey participants ( $p = 0.05$ ) when age was categorized into younger (18 - 26) and older (27 - 56), with the older group reporting a higher stress level (7.7 vs 6.7). None of these participants reported that violence against them or discrimination, were stressors; however, 66.7% reported that lack of acceptance was a stressor. Participants who self-identified within the LGB sexual minority category reported a stress level of 7.5 on a 1 - 10 scale. These participants did identify violence against them (34.7%), discrimination (29.6%), and lack of acceptance (70.3%) as stressors. Participants who identified outside of the mainstream gender binary also reported a lower stress level (6.7) on a 1 - 10 scale. These participants did identify violence against them (33.3%), discrimination (55.5%), and lack of acceptance (75.0%) as stressors. Participants who identified as heterosexual and had either same sex sexual attraction or same sex sexual behavior had an even lower stress level (6.6) on the 1 - 10 scale.

Concerning current tobacco users, about one-third (36.4%) agreed that violence against them is a stressor. Similarly, 25.0% reported discrimination as a stressor. Over half (58.4%) of current tobacco users reported lack of acceptance as a stressor. Current tobacco users reported an average stress level of 8.1 on a 1 - 10 scale. Concerning ever tobacco users, one-third (33.3%) reported violence against them as a stressor. Similarly, 27.3% of them reported discrimination as a stressor. Over half (65.8%) of ever tobacco users reported lack of acceptance as a stressor. Ever tobacco users reported an average stress level of 7.3 on a 1 - 10 scale. Other stress breakdowns are presented in **Error! Reference source not found..**

There was a significant difference in discrimination as a stressor between cisgender and other gender identities, with gender minorities reporting more stress (2.4 v. 3.6  $p = 0.02$ ). When



comparing the three main stressors (discrimination, lack of acceptance, or violence against them) to race (white or minority) stress was marginally significantly higher for minorities in two of these categories, (discrimination 2.6 v 3.8  $p = 0.8$ , lack of acceptance 3.6 v. 4.8  $p = 0.05$ , and violence against them 2.4 v. 3.8  $p = 0.06$ ). Those who self-identified within the LGB community rated “violence against them” as more of a stressor, significantly, than those who self-identified as heterosexuals (1.0 v 2.8  $p = 0.03$ ).

One-fifth (20.0%) of participants reported a lost opportunity in the last six months due to their sexual minority status; even more, 33.3%, had lost an opportunity in the last six months due to another minority status category. Among current tobacco users 42.9% had lost an opportunity in the past six months due to their sexual minority status and 50.0% had lost an opportunity due to another minority status. Ever tobacco users had lower percentages of opportunities lost due to their sexual minority status or another minority status (21.1% and 34.8% respectively).

Other significant findings related to stress include, racial/ethnic minorities reported more than expected lost opportunities due to another minority status (Fisher’s Exact Test,  $p = 0.03$ ). Also, those who were currently living in Texas also reported more than anticipated lost opportunities (Fisher’s Exact Test,  $p = 0.03$ ).

## **Media Findings**

As previously stated in this thesis, a tobacco incidence depicted within movies or TV shows refers to the actual consumption of any tobacco or tobacco related products, and tobacco evidence refers to any indications of tobacco use or products. Overall, all LGBT media had a marginally significantly higher average than all mainstream media of tobacco incidence (6.98  $n = 45$  and 2.40  $n = 45$ ; T-Test  $p = 0.07$ ) and higher evidence of tobacco use, but not significantly (6.68  $n = 38$  and 2.31  $n = 42$ ; T-Test  $p = 0.16$ ).

	<b>n</b>	<b>Mean</b>	<b>p-Value<sup>†</sup></b>
<b>Age</b>			
Younger (19 - 26)	15	6.73	0.05**
Older (27 - 56)	20	7.70	
<b>Race/Ethnicities</b>			
White	32	7.28	0.91
Minority	5	7.20	
<b>Education</b>			
No College	10	7.10	0.67
College Degree	27	7.33	
<b>Residence</b>			
Texas	21	7.43	0.45
Outside of Texas	16	7.06	
<b>Gender Identity</b>			
Cis-Gender	27	7.48	0.15
All Other Identities	9	6.67	
<b>Sexual Orientation</b>			
Lesbian or Gay	11	6.91	0.24
Bisexual	10	7.70	
Pansexual	7	7.86	
Heterosexual	8	6.63	

<sup>†</sup> One Way ANOVA

\*\*Significant  $P \leq .05$

***Table 3. Stress by Demographics and Sexual Orientation (n, Mean, p-value)***

The average tobacco incidence in all movies was 4.70 per movie (n = 23). The average tobacco incidence in LGBT movies was significantly lower than mainstream movies (1.64 n = 11 and 7.50 n = 12 respectively; Mann-Whitney  $p = 0.01$ ). Mainstream drama movies averaged 11.00 (n = 6) tobacco incidence while mainstream comedy movies averaged 4.00 tobacco incidence. LGBT comedy movies averaged 3.60 tobacco incidence. There were no counts of tobacco incidence in LGBT drama movies (n = 6).

The average tobacco evidence for all movies was 5.95 per movie (n = 20). The average tobacco evidence was higher in LGBT movies than mainstream movies (6.30 n = 10 and 5.60 n =

10 respectively; Mann-Whitney  $p = 0.19$ ). LGBT comedy movies had a higher tobacco evidence than mainstream comedy movies (15.25  $n = 4$  and 3.20  $n = 5$  respectively). However, mainstream drama movies had a higher tobacco evidence than LGBT drama movies (8.00  $n = 5$  and 0.33  $n = 6$ ).

There was little difference between the average tobacco incidence in all movies versus all TV shows (4.70  $n = 23$  and 4.69  $n = 67$  respectively). LGBT TV shows had a significantly higher average of tobacco incidence than mainstream TV shows (8.71  $n = 34$  and 0.55  $n = 33$  respectively; Mann-Whitney  $p = 0.00$ ). LGBT TV comedy shows also showed more counts than mainstream comedy TV shows (2.65  $n = 17$  and 1.06  $n = 17$ ). Unlike LGBT drama movies, LGBT TV show dramas had a much higher average tobacco incidence than mainstream drama TV shows (14.76  $n = 17$  and 0.00  $n = 16$  respectively). Tobacco evidence in LGBT TV shows revealed a higher average than mainstream TV shows (6.82  $n = 28$  and 1.28  $n = 32$ ; Mann-Whitney  $p = .203$ ). The tobacco evidence in LGBT comedy TV shows was lower than mainstream comedy TV shows (0.27  $n = 15$  and 1.44  $n = 16$  respectively); however, LGBT drama TV show tobacco evidence was higher than mainstream drama TV shows (14.38  $n = 13$  and 1.13  $n = 16$ ).

Research assistants were asked to evaluate the media they watched for the perceived message about the tobacco use. The overarching perceived message for all movies and TV shows for tobacco use was that tobacco users had an “addiction” to tobacco products (43.2%  $n = 37$ ). When considering the overarching categories (mainstream and LGBT), mainstream media had two main messages, “addiction” and “relaxation” (31.3%  $n = 16$ ), and LGBT media had one, “addiction” (52.4%  $n = 21$ ). When considering only movies, “stress” was the central message (31.6%  $n = 19$ ). “Addiction”, “stress”, and a “neutral message” (neutral message means that

tobacco use was present but there was no indication for its purpose) were the top perceived messages in the LGBT category of movies (37.5% n = 12). “Cool”, “rebellion”, and “relaxation” were the top perceived messages in the mainstream category of movies (36.4% n = 11).

“Addiction” remained the main perceived message across all TV, and both the mainstream and LGBT categories of TV shows (61.1% n = 18, 61.5% n = 13, and 60.0% n = 5 respectively).

Table 4 shows the media reviewers perceived message of tobacco use.

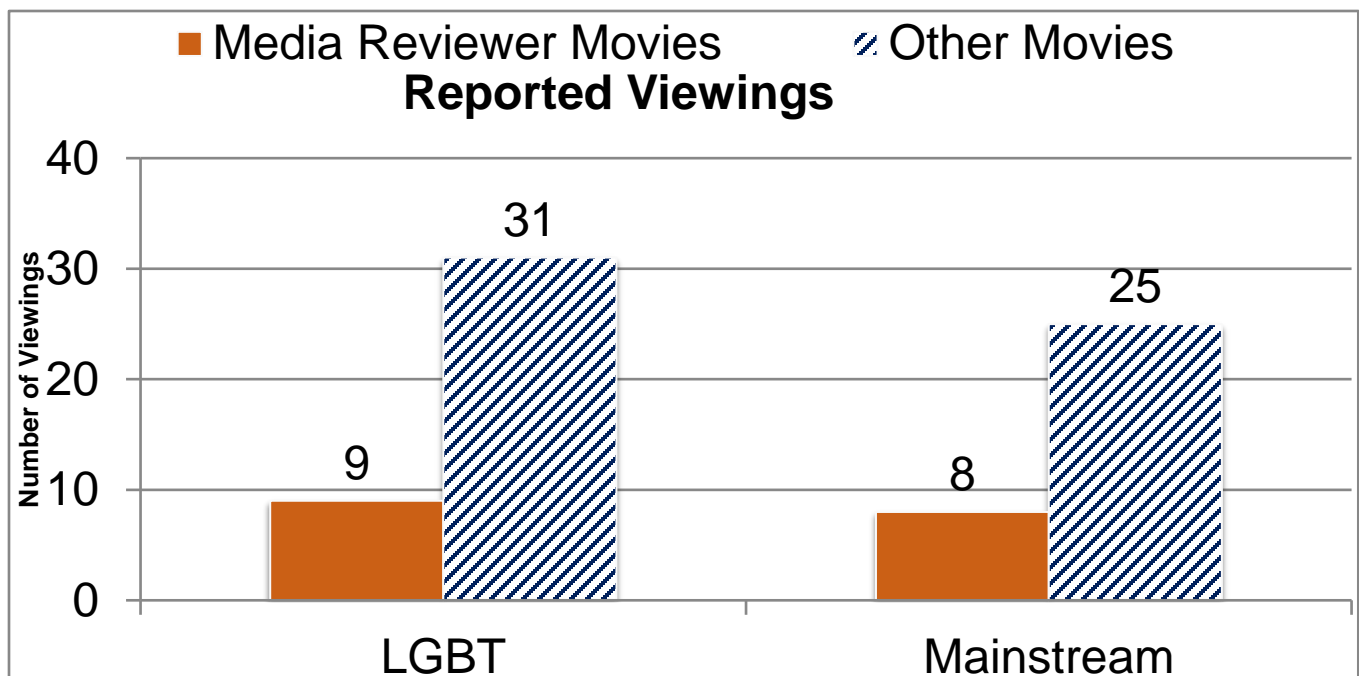
Additionally, the research assistants evaluated the media for the perceived stance on tobacco (pro-tobacco, anti-tobacco, balanced, or neutral). Overall, the assistants rated a tie between a neutral stance (meaning neither for or against tobacco use) and a pro-tobacco stance in all media (38.2% n = 34). About half (55.6%) of the LGBT media was perceived to have a pro-tobacco stance (n = 18). Mainstream media showed a tie between neutral and anti-tobacco

	Cool	Addiction	Rebellion	Neutral	Stress	Relaxation
<b>All</b>	16.2%	43.2%	18.9%	24.3%	35.1%	27.0%
<b>LGBT</b>	9.5%	52.4%	14.3%	23.8%	42.9%	23.8%
<b>Mainstream</b>	25.0%	31.3%	25.0%	25.0%	25.0%	31.3%
<b>Movie</b>	21.1%	26.3%	26.3%	26.3%	31.6%	26.3%
<b>LGBT Movie</b>	0.0%	37.5%	12.5%	37.5%	37.5%	12.5%
<b>Mainstream Movie</b>	36.4%	18.2%	36.4%	18.2%	27.3%	36.4%
<b>TV</b>	11.1%	61.1%	11.1%	22.2%	38.9%	27.8%
<b>LGBT TV</b>	15.4%	61.5%	15.4%	15.4%	46.2%	30.8%
<b>Mainstream TV</b>	0.0%	60.0%	0.0%	40.0%	20.0%	20.0%

***Table 4. Perceived Messages by Type of Media Reviewed***

stances (37.5% n = 16). Across all movies and both LGBT and mainstream movie categories, there was a neutral stance perceived (52.9% n = 17, 83.3% n = 6, and 36.4% n = 11 respectively). All TV and the LGBT category of TV shows contained a pro-tobacco stance (52.9% n = 17 and 75% n = 12). The mainstream category of TV shows revealed a perceived stance of “anti-tobacco” (60.0% n = 5).

The research assistants also reviewed the media for location of tobacco use. A majority of tobacco use was seen either at home or outdoors (57.6% and 54.5% n = 33) in all media. The LGBT category of media showed more tobacco use at home (78.9% n = 19) whereas the mainstream category of media showed more tobacco use outdoors (64.3% n = 14). Movies, specifically LGBT movies, showed more tobacco use at home (47.1% n = 17 and 83.3% n = 6 respectively). About two-thirds (63.6%) of tobacco use in mainstream movies happened outdoors. Tobacco use in TV shows was seen equally at home and outdoors (68.8% n = 16), with LGBT TV shows yielding more at home (76.9% n = 13) and mainstream TV shows having more outdoors (66.7% n = 3).



*Figure 4. Survey Participants Reporting of Movies Seen*

### **Incorporating Both Components**

The survey component relates to the media review component in two ways. First, through Figure 4, there is a commonality between what the survey participants viewed and what the reviewers analyzed. Roughly, the media research assistants analyzed one-third of the movies

seen by survey participants. Second, survey participants viewed more LGBT movies than mainstream movies (40 v. 33).

The next section will discuss the major findings from the thesis and also its strengths and limitations.

## **Discussion**

This study aimed to determine the smoking rate of the LGBT community. This study also sought to explore relationships between LGBT portrayal in the video media and smoking.

### *Survey*

I found that 25.6% of LGB currently use tobacco and 69.8% ever used tobacco in their lives. The current use of tobacco among bisexuals was even higher (38.5%). Rates varied greater for transgender and other gender identities. For example, for transgender adults, 18.2% currently used tobacco and 81.8% ever used tobacco in their lives. These findings are consistent with research previously mentioned that the LGBT community has a higher rate of tobacco use ("Current Cigarette Smoking Among Adults in the United States" 2015; Jabson et al., 2014; "Center Facts: Smoking and the LGBT Community"; Ong and Glantz, 2004; Matthews and Lee, 2011; Conron et al., 2010; Fredriksen-Goldsen et al., 2013; Blosnich et al., 2013a; Blosnich and Silenzio, 2013b; King et al., 2012). This addresses the first aim.

In general, the demographics of the LGBT community, in terms of sex assigned at birth and race/ethnicity, should parallel the demographics of the population at large since sexual orientation is not linked to any specific racial or gender trait. However, this study had proportionally more whites than the general population (86.5% v. 63.0%) (U.S. News, 2013) and was more educated (64.7% v 40.0%) (Matthews, 2016).

While the voices of increasingly empowered lesbians and gay men have grown in force since the 1980's, there is an emerging voice of the smaller sexual and gender minority groups within the LGBT community. More and more groups are promoting other orientations with events such as bisexual pride/awareness and days like National Coming Out Day (observed October 11 in the United States). Pansexual is also an emerging sexual orientation category. The LGBT community began promoting this category because it is more important to be true to

yourself than be forced into the narrow lesbian or gay categories. Bisexuals have long faced shame from both the LGBT and heterosexual communities. Prior to the bisexual pride movements bisexuals were often told things like they are greedy, or gay but don't want to admit it, and/or they just do not know what they want yet. It is likely that the higher than expected numbers of bisexuals and pansexuals in this study can be attributed to the efforts of bisexual pride campaigns. This study found that 30.8% of participants were bisexual and 21.2% were pansexual. There is not copious amounts of data on the demographics of the LGBT community and since pansexual is an emerging sexual identification it is often not an option for participants to select, if chosen to be in a study. In the studies that ask about sexual orientation there is typically 60% lesbian or gay and 40% bisexual representation.

As stated previously, the average smoking rate in the U.S. is about 17%, much lower than the 21.4% of LGBT participants who currently smoke cigarettes. It is estimated that about 26.6% to 30.6% of the LGBT population smoke, higher than what was found in this study (“Current Cigarette Smoking Among Adults in the United States” 2015; Jabson, Farmer, and Bowen, 2014). There was no significant difference among tobacco use rates and educational attainment here. This study also found LGB minorities ever used tobacco significantly more than expected. However, the researcher was expecting an even higher rate of current tobacco use and a much higher rate of ever tobacco use.

As previously mentioned, there may be a relationship between violence and smoking in minority groups, such that, as stress or depression increase, because of a threat of violence, so does smoking (Blosnich and Horn, 2011). This study found evidence to support the notion that tobacco users have the highest levels of stress. Blosnich and Horn (2011) also found that sexual minorities had higher rates of being victims of violence and discrimination, at rates two to three



times higher than the general population. Survey participants were given a list of thirteen possible stressors and asked which would they describe as a stressor. Of the thirteen, three were identified as stressors that would occur more in the LGBT or a minority community than the mainstream population. Those were: (1) discrimination against you, (2) lack of acceptance, and (3) experienced violence (physical or mental) against you based on your sexual orientation or gender identity. As expected, LGB participants reported violence against them as a stressor significantly more than heterosexuals. Over the last few years there appears to be an increase in violence against members in the LGBT community. Based on the minority stress model, it was expected that the self-identified LGBT participants would report higher than self-identified heterosexuals in all three stressors. This study validates this notion.

The June 2016 attack at an Orlando nightclub, Pulse, is a prime example of violence that can trigger stressors within the LGBT community. This shooting is the deadliest mass shooting in modern U.S. history, with 50 dead and 53 injured (“3 Hours in Orlando,” 2016). This event especially caused fear and anxiety to cascade through the national LGBT community as witnessed throughout various social media platforms. While this was a shocking tragedy in American history, many within the LGBT community face daily acts of violence against them, both physical and verbally. Many LGBT youth report being forced out of their homes because they came out. Although it is estimated that LGBT youth make up about 7% of the general youth population, they account for about 40% of the homeless youth population (“The True Colors Fund: Ending LGBT Youth Homelessness,” 2016). After coming out many LGBT persons face rejection from their families and close friends. These examples could all be reasons why the participants in this study reported stress from discrimination, lack of acceptance, and violence. It is likely that since the self-identified heterosexuals in this study had either same sex sexual

attraction or same sex sexual behavior, this effected their perception of lack of acceptance being a stressor. It was unexpected that racial minority participants would report all three stressors higher than their white counterparts. Discrimination is the term more often associated with racial/ethnic inequalities in the work place and other settings. Lack of acceptance however, more often is associated with an individual's personal life. While the two terms seem to go together, they are not often used hand in hand.

### *Media*

It is important to consider the impact of media on tobacco initiation. It was anticipated that LGBT media would show higher amounts of tobacco incidence and evidence than mainstream media. One of the assumptions of this thesis is that the LGBT community is targeted through media for tobacco use, just as tobacco use in movies targeting youth is shown to effect youth tobacco initiation (Washington, 2002). While this issue has not been studied regarding the LGBT community, higher rates of tobacco incidence in media could mediate their behavior.

It is interesting that LGBT TV shows had a significantly higher average tobacco incidence than mainstream TV shows; the researcher expected this. LGBT TV shows were chosen based on the depth and complexity of the LGBT characters, as identified by GLADD, whereas the LGBT movie characters were not evaluated. The GLADD evaluation uses the Vito Russo test ("The Vito Russo Test," 2016), a set of three main criteria: (1) the film contains a character identifiable as LGBT, (2) the character must not be only defined by their sexual orientation or gender identity, and (3) the LGBT character must matter. Also, three of the LGBT TV shows are not on cable, rather they are on primetime (such as HBO and Showtime). Mainstream TV shows were only chosen from the top five cable TV channels. While this is a possible limitation it also shows that network TV and primetime TV are not equal in the portrayal of the LGBT community. This could possibly be because primetime stations do not

solely rely on the general viewer since it requires an additional subscription fee to view. The additional subscription fee may allow primetime networks to have edgier shows that break the mold for the network shows.

Surprisingly, the tobacco use rate from this study was significantly lower in LGBT movies than mainstream movies. This could be due to the fact that most LGBT films are independent films or produced on a very small budget, and do not receive consumer product contracts from big company endorsements.

It is surprising that the overall message the research assistants perceived was “addiction” across all media. The reviewers used two indicators to classify the tobacco use as “addiction”: (1) being triggered by stress or other situations to use tobacco and (2) the characters placed more value on tobacco use than basic needs. One of the top perceived messages for tobacco use in LGBT movies was “stress”, which is interesting since LGBT persons from the survey also reported having high stress. The survey portion of this thesis reports stress on a 1 - 10 scale, the respondents had an average stress of 7.3. This takes a “normal” feeling, stress, and associates tobacco use with it. The association also yields a pro-tobacco use message, since a majority of tobacco use in LGBT media was perceived to be pro-tobacco, whereas, in mainstream media it was either neutral or anti-tobacco.

Another interesting finding was that LGBT movies also included a neutral perceived message and a neutral stance on tobacco use. This means that tobacco use served no purpose other than scenery or to just be there. This type of tobacco use in films could be perceived as promoting tobacco use as a “normal” behavior. Since these messages were present in primarily LGBT media, general viewers could associate tobacco use as a “normal” LGBT behavior. This perception could contribute to the higher smoking rates in the LGBT community for two reasons:

(1) the general population expects it from them, and (2) LGBT persons believe it is a normal and expected part of being a member of the LGBT community. When an individual comes out there is usually a period of finding one's self. This process is different for everyone but some may rely on the perceptions of the general population and what they have seen in media to determine appropriate behaviors. There is a misconception, even within the LGBT community, that there are specific behaviors that make you LGBT, like gay men acting effeminate. Due to the excessive media portrayal of tobacco use in LGBT media, tobacco use could be one of those behaviors that someone coming out may think they must do in order to be an accepted member of the LGBT community.

Other findings showed that drama media to have more tobacco incidence than comedy. This could be due to a higher rate of hallucinogenic related smoking (such as weed) in comedies supplanting tobacco use, as seen in the growing collection of “stoner” comedies. It was not expected that both movie and TV shows would have almost the same tobacco incidence average. The researcher instead expected there to be more tobacco use in movies.

As to the second aim, a direct causal relationship could not be established but the following claim can be made, there is a possible association between tobacco incidence in LGBT media and the higher prevalence of tobacco use in the LGBT community. This claim is supported through this study because (1) the LGBT smoking rate is higher, (2) there were higher incidences of tobacco use in LGBT media, and (3) LGBT participants viewed more LGBT media.

## **Limitations and Strengths**

### *Survey*

Unlike the general population, the demographic of LGBT tobacco users for this study were more educated and more likely to be female. This is contrary to the King et al. (2012)

finding that as education level increases smoking rates decrease. This survey also had an over representation of whites. According to the minority stress model this could impact the results because whites would have less stress and therefore a lower tobacco use rate. The sample size ( $n = 63$ ) is small and was acquired through the snowball method which is not random.

It is worth noting that the Pulse Night Club shooting occurred during survey data collection. This could account for the higher than expected response to violence against one's self being a stressor. This could also explain the higher than expected response to "violence against you" being a stressor. This is hard to gauge since "normal" stress levels due to violence are not known. Still, the Orlando Shooting added some form of contamination into this study.

As to the strengths, the survey gathered enough participants for adequate statistical testing. Ten gatekeepers led to the collection of 63 qualified survey responses. While this was lower than expected it is a good response total for a harder-to-reach population. Despite the reputation the LGBT community has of being reluctant to release identifying information, the snowball method seems to be an effective way to reach this population. The finding of the survey was also consistent with other studies, showing higher tobacco prevalence in the LGBT population.

### *Media*

The movie and TV industry have limited ways to categorize media. There are overarching genres, like comedy and drama, however there is not a subgenre of LGBT TV shows like there is for LGBT movies. While being a member of the LGBT community is not considered mainstream, the mainstream community has become more aware of the LGBT community in recent years.

Concerning source of material, only Netflix was considered for movies, whereas multiple platforms were considered for TV. This limited the number of big box office movies to choose

from.

All three research assistants attended media training. However, they did not attend it together. This training instructed them to look for tobacco and tobacco related products, as outlined in the methods section. Research Assistants were instructed to disregard any non-tobacco related smoking. This could have caused some variance in how they understood the material and therefore how they tallied the media.

Since all of the research assistants have a background in health their perceptions might have been skewed, and they perhaps were more sensitive to tobacco evidence reporting. The inter-rater reliability for tobacco incidence was slightly below “consistent reporting” and the inter-rater reliability for tobacco evidence was very low. Despite their background and training, tobacco evidence was still difficult to accurately count, possibly due to how varied and subtle it could be.

Lastly, some substitutions may have confused the research assistants. For example, Game of Thrones is a fantasy show set centuries ago, before tobacco was commercialized. The show does depict a tobacco like product referred to as sour leaf. The research assistants were made aware of this and told to count sour leaf as a tobacco incident.

As to the media review, a strength is that the shows were chosen at random; they were not viewed beforehand nor were they checked that tobacco was used or mentioned in any of the media.

This thesis included a mixed methods approach, allowing the notion of data triangulation (Tashakozi & Teddlie, 1998) having two different data streams (survey and media review) to validate each other.

## **Future Research**

Further research on the relationship between tobacco use in LGBT media and the prevalence of tobacco use is needed. Exploring stressors within the LGBT community across different demographics may also give more insight to the higher rates. Research establishing a protocol for identifying LGBT community subgroups is also needed since several methods are currently in use. Once a more consistent method of identification is established the actual prevalence of tobacco use in the LGBT community will become easier to determine and track.

## **Personal Note**

While not all of the findings in this study were surprising, it was impactful to experience the process first-hand. Noticing anecdotally that I felt the LGBT media were different and seeing the research support that hunch was both rewarding (because my data supported past research) and disappointing (because proof of a disparity is not a good thing). During the planning of this study, I did not anticipate the challenges of getting survey responses or training the media reviewers. I did not recreate or directly follow another study which allowed for more creativity and exploration but less guidance. After reviewing other LGBT articles for this thesis I noticed an inconsistency in how the researcher identified the LGBT community members. The inconsistencies made it harder to compare articles. I chose to be very careful in how I would classify an LGBT person and developed questions around those qualifications (self-identification, sexual behavior, and sexual attraction).

Coming out still has a variety of consequences. For people in the south those consequences are often negative. Not all LGBT youth have a role model or person they can identify with (Bird, Kuhns, & Garofalo, 2012). If the person they turn to is a character in a movie or TV show who is a smoker this can normalize the behavior, increasing the likelihood of them initiating tobacco use.

There are a few things that I would change if I had the opportunity to redo this study. First I would use more validated questions for the survey portion. Second, to connect both data components of this thesis and address the second aim, I would complete the survey first, asking more about participants' media viewing habits and use those responses to develop the list of media the reviewers analyzed. I would also initiate relationships with gatekeepers' sooner and reach out to more of them. The last part I would change would be the media training. I would add a full viewing of a movie and TV show to allow the reviewers a "practice run" for the evaluation process. This could help give better expectations to the reviewers.



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## Appendix A. Common Term Definitions

Term	Definition
Attraction Identified	Attraction identification determines orientation based on who the person is sexually attracted to regardless if they have engaged in sexual relations with that gender currently or previously.
Behavior Identified	Behavior identification focuses specifically whom the participant has had sex with previously and currently; it may or may not ask about attraction but typically asks the participant to self-identify.
Bisexual	A person identifying as either a male or female that has sex with others of the same sex and opposite sex and classifies themselves as a bisexual
Gay	A person identifying as a male that has sex with other males and classifies themselves as gay
Gender Identity	A persons' gender identity is how they present themselves regardless of the gender assigned at birth.
Lesbian	A person identifying as a female that has sex with other females and classifies themselves as a lesbian
LGBT	Lesbian, Gay, Bisexual, and/or Transgender - sometimes represented as LGB if no transgendered persons participated.
MSM	A man who identifies as heterosexual but either previously or currently has sex with other men.
Self-Identified	Self-identified measures can ask a person's orientation or how they classify themselves. Self-identification does not ask about sexual practices, attraction, or history.
Sexual or Gender Minority (SGM)	SGM is a way of broadly referring to the LGBT population. SGM includes heterosexuals that engage in sex with the persons of the same gender.
Transgender	a person born as either a male or female but now identifies and presents themselves as the opposite sex. Some have begun or completed the process to physically match their identification.
WSW	A woman who identifies as heterosexual but either previously or currently has sex with other women.



## Appendix B. Survey

This survey was completed through Qualtrics; therefore, it was not seen in this exact format.

<p>1.) You are being asked to participate in a survey research project entitled “Smoking Prevalence and media Impact on Smoking Behavior Among the Adult LGBT Community,” which is being conducted by Christina Tuell, a student at The University of Texas at Tyler. This survey is anonymous. No one, including the researcher, will be able to associate your responses with your identity. Please do not type in your name or put any other identifying information on the survey. The purpose of this study is to determine the smoking rate in the LGBT community. Although you may find some of the questions embarrassing/briefly upsetting, there are no anticipated long-term risks to you related to your participation in this study. Some of the questions in this survey may cause you to recall unpleasant or emotionally upsetting experiences. If you feel you need to speak with a professional counselor about these memories or your response to them, you may contact The Trevor Project at 866.488.7386 or TheTrevorProject.org for help. Your participation in this survey is voluntary. You may choose not to take the survey, to stop responding at any time, or to skip any questions that you do not want to answer. You must be at least 18 years of age to participate in this study. Your completion of the survey serves as your voluntary agreement to participate in this research project and your certification that you are 18 or older. Questions regarding the purpose or procedures of the research should be directed to Christina Tuell at 903.969.0782 or ctuell@patriots.uttyler.edu. This study has been exempted from Institutional Review Board (IRB#Sp2016-80) review in accordance with Federal regulations. The IRB, a university committee established by Federal law, is responsible for protecting the rights and welfare of research participants. If you have concerns or questions about your rights as a research participant, you may contact the IRB Administrator, Dr. Gloria Duke at 903.566.7023 or gduke@uttyler.edu The survey should take 20 – 30 minutes to complete. Please answer the questions honestly and to the best of your ability.</p>											
<div style="display: flex; justify-content: space-around;"> <span>I Agree</span> <span>I Disagree</span> </div>											
<p>2.) What is your current age (in years)? _____</p>											
<p>3.) What is your sex at birth (meaning on the original birth certificate)?</p> <div style="display: flex; justify-content: space-around;"> <span>Male</span> <span>Female</span> </div>											
<p>4.) What is your current gender identity? Please select the one that best fits.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Male</td> <td style="width: 33%;">Female</td> <td style="width: 33%;">Transgender Male</td> </tr> <tr> <td>Gender Queer</td> <td>Gender-Nonconforming</td> <td>Transgender Female</td> </tr> <tr> <td>Intersex</td> <td>Two Spirit</td> <td>Other/ A Gender Not Listed, Please Sp</td> </tr> </table>			Male	Female	Transgender Male	Gender Queer	Gender-Nonconforming	Transgender Female	Intersex	Two Spirit	Other/ A Gender Not Listed, Please Sp
Male	Female	Transgender Male									
Gender Queer	Gender-Nonconforming	Transgender Female									
Intersex	Two Spirit	Other/ A Gender Not Listed, Please Sp									
<p>5.) Describe your race/ethnicity. Please select the one that best fits.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Asian</td> <td style="width: 33%;">Pacific Islander</td> <td style="width: 33%;">White or Caucasian - Non Hispanic</td> </tr> <tr> <td>Hispanic or Latino/a</td> <td>Biracial / Multiracial</td> <td>American Indian or Alaskan Native</td> </tr> <tr> <td colspan="3">Other _____</td> </tr> </table>			Asian	Pacific Islander	White or Caucasian - Non Hispanic	Hispanic or Latino/a	Biracial / Multiracial	American Indian or Alaskan Native	Other _____		
Asian	Pacific Islander	White or Caucasian - Non Hispanic									
Hispanic or Latino/a	Biracial / Multiracial	American Indian or Alaskan Native									
Other _____											
<p>6.) What city do you currently live in? _____</p>											
<p>7.) What is your hometown? _____</p>											

8.)	What is the highest level of education you have completed? Please select the one that best fits.		
	Less than High School Diploma	Some College	Bachelors Degree
	High School Diploma	Associates Degree	Some Graduate College
			Any Graduate Degree
9.)	What is your sexual orientation? Please select the one that best fits.		
	Gay	Asexual	Questioning
	Lesbian	Heterosexual/Straight	Pansexual
	Bisexual	Queer	A sexual orientation not listed: _____
10.)	What year did you come out? _____		
11.)	Are you an ally to the LGBT community? (Ally meaning a person who supports equal rights, gender equality, the LGBT social movement, and/or challenges homophobia or other hateful ideologies towards the LGBT community.)		
	Yes	No	I Don't Know
12.)	Do you have close friends or close family members who are LGBT?		
	Yes	No	
13.)	Are you currently engaging in sexual activity with someone of the same sex?		
	Yes	No	
14.)	Have you previously had a sexual experience with someone of the same sex?		
	Yes	No	
15.)	Are you currently or have you ever been sexually attracted to someone of the same sex?		
	Yes	No	
16.)	How important are movies in your life?		
	Not at all Important	Neither Important nor	Somewhat Important
	Very Unimportant	Unimportant	Very Important
	Somewhat Unimportant		Extremely Important
17.)	How many movies (either in theatre's or on a streaming device like Netflix) do you see a month, on average? _____		
18.)	How important are TV series in your life? (TV series meaning a series of related productions produced for TV, Netflix, Hulu, or similar networks)		
	Not at all Important	Neither Important nor	Somewhat Important
	Very Unimportant	Unimportant	Very Important
	Somewhat Unimportant		Extremely Important
19.)	How many TV shows do you follow regularly during its season, per year?		
	0 - 2	3 - 5	6 - 8      9 +
20.)	Who are 3 notable gay characters (not actors) on TV? _____ _____		
21.)	Who are 3 notable gay characters (not actors) in movies? _____ _____		

22.) Which of the following movies have you watched in the last 5 years?		
The Kids are All Right	Kiss Me	The Grand Seduction
Dirty Girl	Pariah	Big Ass Spider!
Beginners	Elena Undone	Filly Brown
The Perfect Wedding	Angels of Sex	Jobs
Cloudburst	North Sea Texas	Dope
First Period	Jenny's Wedding	Brotherly Love
Tangerine	Paradise	The Best of Me
Lilting	Starbuck	Drinking Buddies
Anatomy of a Love Seen	Home	You're Not You
Naked as we Came	A Long Way Down	The Way He Looks
Will You Still Love Me	Hector and the Search	
Tomorrow	for Happiness	
23.) Have you ever smoked tobacco cigarettes?		
Yes	No	
24.) Do you currently smoke tobacco cigarettes?		
Yes	No	
25.) How many years have you smoked tobacco cigarettes?		
_____		
26.) How many years did you smoke tobacco cigarettes?		
_____		
27.) About how many tobacco cigarettes do you smoke daily?		
_____		
28.) At what age did you start / try tobacco cigarettes?		
_____		
29.) Do you currently use cigars, little cigars, cigarillos, pipes, or similar products?		
Yes	No	
30.) Have you ever smoked cigars, little cigars, cigarillos, pipes, or similar products?		
Yes	No	
31.) How many years have you used cigars, little cigars, cigarillos, pipes, or similar products?		
_____		
32.) How many years did you use cigars, little cigars, cigarillos, pipes, or similar products?		
_____		
33.) About how many cigars, little cigars, cigarillos, pipes, or similar products do you use daily?		
_____		
34.) At what age did you start / try cigars, little cigars, cigarillos, pipes, or similar products?		
_____		
35.) Have you ever used dip, snus, chewing tobacco, or similar products?		
Yes	No	



36.) Do you currently use dip, snus, chewing tobacco, or similar products?						
Yes <span style="margin-left: 100px;">No</span>						
37.) How many years have you used dip, snus, chewing tobacco, or similar products?						
_____						
38.) How many years did you use dip, snus, chewing tobacco, or similar products?						
_____						
39.) About how much dip, snus, chewing tobacco, or similar products do you use daily?						
_____						
40.) At what age did you start / try dip, snus, chewing tobacco, or similar products?						
_____						
41.) Have you ever used alternative tobacco products (e-cigarettes, hookah, e-hookah, bidis, ect.						
Yes <span style="margin-left: 100px;">No</span>						
42.) Do you currently use alternative tobacco products (e-cigarettes, hookah, e-hookah, bidis, ect.)?						
Yes <span style="margin-left: 100px;">No</span>						
43.) How many years have you used alternative tobacco products (e-cigarettes, hookah, e-hookah, bidis, ect.)?						
_____						
44.) How many years did you use alternative tobacco products (e-cigarettes, hookah, e-hookah, bidis, ect.)?						
_____						
45.) About how often do you use alternative tobacco products (e-cigarettes, hookah, e-hookah, bidis, ect.) daily?						
_____						
46.) At what age did you first start / try alternative tobacco products (e-cigarettes, hookah, e-hookah, bidis, ect.)?						
_____						
47.) On a scale of 1-10, with 1 being none and 10 being extremely high, how much stress do you experience in an average week?						
1   2   3   4   5   6   7   8   9   10						
48.) Which of the following would you describe as a stressors for you? (Agree if yes, it is a stressor; disagree if no, it is not a stressor.)						
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Not Applicable
Living with parents						
Preparing Food						

Experience violence (physical or emotional) against you based on your sexual orientation or gender identity						
Paying Bills						
Lack of acceptance						
Raising children						
Employment (job)						
School						
Shopping						
Discrimination against you						
Living with partner						
Getting through the day						
Driving 15 minutes or more						
<b>49.) During the last six months have you lost an opportunity due to your sexual minority status?</b>						
Yes	No	I Don't Know		Not Applicable		
<b>50.) During the last six months have you lost an opportunity due to your sexual minority status?</b>						
Yes	No	I Don't Know		Not Applicable		
<b>51.) In the last six months have you felt:</b>						
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Not Applicable
Productive						
Focused						
Depressed						
Annoyed						
Anxious						
Suicidal						
Creative						

Stressed						
52.) When you imagine a "typical" smoker, outside yourself in general, what do you think of? (please give a brief, general description).						
53.) What age range do you imagine this "typical" smoker is?						
Under 18	26 - 35	46 - 55				
18 - 25	36 - 45	56 +				
54.) What race/ethnicity do you imagine this "typical" smoker is?						
Hispanic / Latino/a	Pacific Islander	Caucasian / White - Non Hispanic				
Asian	Other _____	Black / African American				
55.) Which of the following groups is more likely to smoke? Please rank in order by dragging the lines into order (1 being most likely 8 being least likely).						
Lesbian / Gay Man	Male / Female Athlete					
Bisexual	Geek / Nerd					
Transgender Male / Transgender Female	Employed / Professional					
Sorority Girl / Fraternity Guy	Homeless					
56.) Please answer the following questions based on how much you agree with the following statements:						
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Not Applicable
I have gay friends.						
I am open to other cultures						
I like new things						
I enjoy engaging with people who are different than me						
I care about diversity						
Race / ethnicity does not effect my decisions						
I travel a lot						

Members of the LGBT community are accepted in my community						
Members of other race / ethnicities are accepted in my community						

---

**57.)** On a scale of 0% to 100% (0% is Not at all; 100% is Completely)

How straight / heterosexual are you?

How gay / homosexual are you?

---

**58.)** Please select your level of agreement with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Not Applicable
The first people you came out to accepted you.						
There was a lot of stress surrounding coming out in the beginning.						
There is a lot of stress about telling people now about your sexual orientation.						

59.) Please select your level of agreement with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Not Applicable
It is very important to me that some of my friends are bisexual or gay.						
Being gay makes me feel part of a community.						
Being attracted to a person of the same gender is important to my sense of who I am.						
I feel very different from the LGBT community.						



## Appendix C. Tally Form

### **Tuell Thesis Media Review Form**

Please watch one film/TV show at a time. "Tobacco type used" will be defined as when you see a character engage in smoking, putting the cigarette to their lips, spitting dip, exhaling smoke while holding the cigarette, etc.. "Tobacco type visible" will be defined as seeing a pack of cigarettes, references to using tobacco, ash trays, cigarette butts, etc..

Movie:	Category/Genre:
Reviewer:	Date:

**A. Extent and Type of Tobacco Use:** Write in the amount of incidents for each type of tobacco.

Cigarettes \_\_\_\_\_ Cigars \_\_\_\_\_ Pipes \_\_\_\_\_ Smokeless \_\_\_\_\_  
 Other \_\_\_\_\_ **TOTAL** of **ALL** incidents \_\_\_\_\_

**A. Evidence of Tobacco Use:** Use this space to write in all tobacco types visible and how many times it is visible.  
 EX. If the movie shows a billboard and an empty pack of cigarettes those would be separate and each count as one.


**B. Who Uses Tobacco:** Please fill in the blanks to the best of your ability. Note the name of the actress/actor or their characters name and their gender in the movie. If they are a trans-woman circle woman and trans, if their gender is unclear or not specified then circle non-binary. Write in the tobacco type and tally the number of times it was used or visible. Do your best to ascertain if the character is 18 or older if it is not expressly stated.

Actor/Actress		Tobacco Type		Age	LGBT		
				Over 18	Lesbian	Gay (Male)	Bisexual
Male	Transgender	Used:		Under 18	Pansexual	Queer	Questioning
Female	Non-Binary	Visible:			Other _____	Unknown	Heterosexual

Actor/Actress		Tobacco Type		Age	LGBT		
				Over 18	Lesbian	Gay (Male)	Bisexual
Male	Transgender	Used:		Under 18	Pansexual	Queer	Questioning
Female	Non-Binary	Visible:			Other _____	Unknown	Heterosexual

Actor/Actress		Tobacco Type		Age	LGBT		
				Over 18	Lesbian	Gay (Male)	Bisexual
Male	Transgender	Used:		Under 18	Pansexual	Queer	Questioning
Female	Non-Binary	Visible:			Other _____	Unknown	Heterosexual

**C. Where does Smoking Occur:** Please circle the appropriate locations (**Note:** you can circle more than one).

Home	Workplace	Restaurant	Vehicle
Bar/Nightclub	K-12 School	Medical Facility	Hotel/Motel
Outdoors <i>Describe:</i> _____		Other Area <i>Describe:</i> _____	

**D. Brands Visible:** Please circle the appropriate locations (**Note:** you can circle more than one).

Brand (s) Visible: _____	Number of Times Visible _____		
How is the Brand Depicted:			
Billboard or poster	Magazine Ad	Tobacco container	Mentioned

**E. Anti-tobacco Message Displayed:** If any anti-tobacco information is included, please circle and fill in any blanks that apply.

No Smoking Sign	Anti-Smoking poster or billboard
Comment by actor or actress	Visual clue by actor or actress
Other: _____	

Is the comment or visual clue related to :

The health of a person using tobacco? **Or** The health of a person not using tobacco?

**F. Perceived Message on Tobacco Use:** Please circle the words that represent the tobacco related message that you feel were portrayed. Select all that apply.

Sexy	Fun	Celebration	Wealth/Power	Cool
Independent/Unique	Habit/Addiction	Rebellion	Loser	Neutral
Cool	Tension/Stress	Relaxation	Other (please explain): _____	

**Overall How would you say the majority of tobacco messages were:**

Pro-tobacco   Anti-Tobacco   Balanced   Neutral

**Other Comments:** \_\_\_\_\_


## Appendix D. IRB Approval



THE UNIVERSITY OF TEXAS AT TYLER  
3900 University Blvd. • Tyler, TX 75799 • 903.565.5774 • FAX: 903.565.5858

Office of Research and  
Technology Transfer

Institutional Review Board

March 3, 2016

Dear Ms. Tuell,

Your request to conduct the study: *Smoking Prevalence and Media Impact on Smoking Behavior Among the Adult LGBT Community*, IRB #SP2016-80 has been approved by The University of Texas at Tyler Institutional Review Board as a study exempt from further IRB review. This approval includes a waiver of signed, written informed consent. In addition, please ensure that any research assistants are knowledgeable about research ethics and confidentiality, and any co-investigators have completed human protection training within the past three years, and have forwarded their certificates to the IRB office (G. Duke).

**Please review the UT Tyler IRB Principal Investigator Responsibilities, and acknowledge your understanding of these responsibilities and the following through return of this email to the IRB Chair within one week after receipt of this approval letter:**

- Prompt reporting to the UT Tyler IRB of any proposed changes to this research activity
- **Prompt reporting to the UT Tyler IRB and academic department administration will be done of any unanticipated problems involving risks to subjects or others**
- Suspension or termination of approval may be done if there is evidence of any serious or continuing noncompliance with Federal Regulations or any aberrations in original proposal.
- Any change in proposal procedures must be promptly reported to the IRB prior to implementing any changes except when necessary to eliminate apparent immediate hazards to the subject.

Best of luck in your research, and do not hesitate to contact me if you need any further assistance.

Sincerely,

Gloria Duke, PhD, RN  
Chair, UT Tyler IRB

EQUAL OPPORTUNITY EMPLOYER