

THE INFLUENCES OF NEGATIVE PUBLICITY ON CIGARETTE SALES

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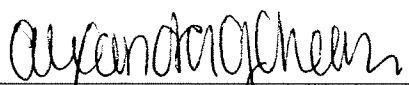
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Abstract

This thesis addresses the issue of the affects of negative publicity on the cigarette industry. The types of negative publicity addressed include health warnings, anti-smoking campaigns and government regulations. The hypothesis states that all of these aspects of negative publicity will be shown to have an influence on the decrease in cigarette consumption. Self-administered questionnaires are distributed to men and women over the age of eighteen. One hundred and six persons respond to the survey, providing the data needed to support or refute the hypothesis. After analysis, this thesis demonstrates its support for the hypothesis, stating that health warnings, anti-smoking campaigns and government regulations are all effective in lowering cigarette consumption.

(negative publicity, cigarette consumption, aspects of smoking)

ON MY HONOR, I HAVE NEITHER GIVEN NOR RECEIVED
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Alexandra G. Cheever

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CHAPTER I

INTRODUCTION

According to the United States Department of Agriculture, the tobacco industry sells hundreds of billions of cigarettes annually. While today sales remain in the hundreds of billions, they have been falling for decades. Why? One theory is that negative publicity for cigarettes has decreased peoples' desire to continue smoking and their will to ever initiate the cancerous habit. This thesis hopes to discover whether there is any truth behind this theory.

The purpose of this thesis is to understand whether or not negative publicity for cigarettes has an impact on the cigarette industry. Health warnings, anti-smoking campaigns and government regulations are all aspects of negative publicity for the cigarette industry. The intention of this research is to determine which aspects of negative publicity have the strongest affects on cigarette consumption, if they have any influence at all. Understanding this will allow us to discover whether or not government policies and anti-smoking campaigns are a waste of time and money. Or, on the other hand, do the policies and campaigns really make a difference, and if so should they continue to grow?

With cigarette consumption on the decline it is important to understand why. Past studies are very contradictory and leave an investigator confused whether or not any of the predicted variables contribute to the reduction in consumption. This information is

beneficial not only to the curious reader, but also to the cigarette industry and the organizations from which negative publicity for cigarettes stems.

Managers in the cigarette industry should understand what influences decreases in sales. This way, they can attempt to challenge these factors and once again increase their sales. Anti-smoking campaign organizers and government legislators would want this information to discover if all their work is making a difference. If not, they can re-evaluate strategies to make their work more effective. Could time spent creating legislation to ban cigarette advertisements and smoking in public be spent better elsewhere? Or should they spend more time creating new, successful laws? The information discovered through this thesis will be useful to several organizations.

The main question that this thesis will address is: Does negative publicity for cigarettes, such as health information, anti-smoking campaigns, and government regulations, shape the number of cigarette sales? The thesis will look to explain what factors influence consumption and attempt to explain why these factors change consumption as they do. Therefore, the dependent variable being examined is cigarette consumption. The independent variables considered, which influence the dependent variable, are: the effects of anti-smoking campaigns, the effects of health information and the effects of government policy. The hypothesis is that all the aspects of negative publicity being addressed (health information, anti-smoking campaigns and government regulations) will be shown to have an impact on the decrease of cigarette consumption.

As previously stated, much of the research done in past years is very conflicting. Warner studies the impact of anti-smoking campaigns on the consumption of cigarettes and finds that had there been no campaigns, consumption would have increased by

twenty to thirty percent. Instead, consumption decreased by five percent.¹ On the other hand, Bardsley and Olekalns find that anti-smoking campaigns have “no detectable direct effect” on cigarette use.² Goel and Morey find that advertising bans lessen consumption,³ while Bardsley and Olekalns determine that advertising bans do not change cigarette consumption at all.⁴ Bishop and Yoo discover that health scares have little influence on the demand for cigarettes,⁵ but Hamilton finds that health scares do lower cigarette consumption.⁶ The following chapter will take a closer look into these studies, as well as several others.

Also important to review, in relation to this topic, are several different theories. The theory chapter will investigate three theories: marketing, rational choice and the economics of addiction. Reviewing the ideas based in these theories will help to further this thesis. Marketing creates both positive and negative advertising for the cigarette industry. Rational choice is a branch of logic describing the process by which persons make decisions. Finally, the economics of addiction address the fact that cigarettes are an addictive substance and there are patterns of behavior for addicted individuals.

¹ Kenneth E. Warner, "The Effects of the Anti-Smoking Campaign on Cigarette Consumption," American Journal of Public Health (July 1977): 645.

² Peter Bardsley and Nilss Olekalns, "Cigarette and Tobacco Consumption: Have Anti-Smoking Policies Made a Difference?" Economic Record (Sept. 1999): 230.

³ R. K. Goel and M. J. Morey, "The interdependence of cigarette and liquor demand," Southern Economic Journal (1995): 459.

⁴ Bardsley and Olekalns, "Cigarette and Tobacco Consumption...", 238.

⁵ John A. Bishop and Jang H. Yoo, "'Health Scare,' Excise Taxes and Advertising Ban in the Cigarette Demand and Supply," Southern Economic Journal (Oct. 1985): 410.

⁶ James L. Hamilton, "The Demand for Cigarettes: Advertising, the Health Scare, and the Cigarette Advertising Ban," The Review of Economics and Statistics (Nov. 1972): 409.

This thesis will use the method of self-administered questionnaires to collect data. Due to the fact that this thesis seeks to discover why each factor influences cigarette consumption, qualitative analysis is essential. Within the questionnaire are three separate surveys, one for smokers, one for those who have quit smoking and one for non-smokers. The self-administered questionnaires will be a product of convenience sampling, distributed only in Colorado Springs, Colorado.

All of the independent variables are expected to be significant in establishing cigarette consumption. In reflection of the hypothesis, it should be expected that anti-smoking campaigns, health information, and government policies all contribute to the decrease in cigarette consumption.

CHAPTER II

LITERATURE REVIEW

This thesis will investigate the influences of negative publicity on cigarette sales. The more specific question that it will address is: How does negative publicity for cigarettes, such as anti-smoking campaigns, government regulations, and health information, affect the consumption of cigarettes? Because the thesis will attempt to investigate whether negative publicity for cigarette companies has a substantial effect on their sales, this chapter reviews previous studies pertaining to cigarette smoking, including the affects of anti-smoking campaigns, government regulations, health warnings, advertisements, and the general demand for cigarettes. Much of this research was published years ago, and this thesis will help to update some of this information.

Most negative publicity for cigarette companies stems from anti-smoking campaigns. Warner discusses the impact of these campaigns on the consumption of cigarettes by measuring the impact with pre-campaign data and then making projections for what sales would have been had the campaigns never taken place. After comparing these projections to actual cigarette consumption, the study finds that had there been no campaigns, consumption would have increased by twenty to thirty percent. Instead consumption decreased by five percent. Television and radio ads also reduced cigarette use by about four percent every year.¹ Therefore, according to Warner, anti-smoking

¹ Kenneth E. Warner, "The Effects of the Anti-Smoking Campaign on Cigarette Consumption," American Journal of Public Health (July 1977): 645.

campaigns do significantly reduce the number of sales of cigarettes. A predicted increase in sales of twenty to thirty percent that does not occur for the industry may be extremely harmful but demonstrates great success for the anti-smoking campaigns.

On the other hand, Bardsley and Olekalns find that anti-smoking campaigns and bans on media advertising have had “no detectable direct effect” on cigarette use.² Through the analysis of data on income, pro-smoking advertising, anti-smoking advertising, government interventions and the age structure of the population, Bardsley and Olekalns form regression equations to interpret the data and the result that negative publicity has on cigarette consumption.³ Instead of anti-smoking campaigns and bans on advertising having an effect, they find that income affects consumption. Also, bans on smoking in the workplace and health warnings printed on cigarette packages result in a decrease of cigarette use.⁴ Bardley and Olekalns look at each aspect of negative publicity that this thesis also aims to investigate. In relation to cigarette use, they find that anti-smoking campaigns do not cause any concern. They also find that government regulations pertaining to bans on media advertising do not have an effect, but government regulations on smoking at work do have consequences, as the ban decreases consumption. The aspect of health information that Bardley and Olekalns address also reduces the utilization of cigarettes. This suggests that perhaps a closer look into government regulations may be important, so that the government may redistribute its efforts, focusing on the more effective bans.

² Peter Bardsley and Nilss Olekalns, "Cigarette and Tobacco Consumption: Have Anti-Smoking Policies Made a Difference?" Economic Record (Sept. 1999): 230.

³ Bardsley and Olekalns, "Cigarette and Tobacco Consumption...", 238.

⁴ Bardsley and Olekalns, "Cigarette and Tobacco Consumption...", 233.

Hu, Sung and Keeler suggest the hypothesis that for many people the decision to smoke is made with insufficient information. Their study finds a strong correlation between both negative and positive advertising and cigarette consumption.⁵ This conclusion leads us to believe that people make their decision to smoke based on whichever advertisement they see, either the positive or negative; they might make a different decision if they preview all advertisements and get an array of information. An industry response to anti-smoking campaigns is indicated by Keeler et al., who find that cigarette firms price cigarettes based on anti-smoking efforts in the area, therefore lowering prices in an attempt to challenge the anti-smoking campaigns.⁶ So, while anti-smoking campaigns battle cigarette advertisements with their own ads, the cigarette industry offers a rebuttal with lower prices, demonstrating the back-and-forth battle between anti-smoking campaigns and the cigarette industry.

Government regulations are very prominent in the discussion of cigarette consumption. Warner and other researchers address government regulations on tobacco—for instance, the price of cigarettes relative to state and federal taxes. During Warner's study there was an increase in the price of cigarettes due to an increase in taxes. It is possible that the taxes were a response to the anti-smoking campaigns active at the time, as there were a significant number of tax increases during the campaigns, as

⁵ Teh-Wei Hu, Hai-Yen Sung, and Theodore E. Keeler, "The State Antismoking Campaign and the Industry Response: The Effects of Advertising on Cigarette Consumption in California," The American Economic Review, Papers and Proceedings of the Hundred and Seventh Annual Meeting of the American Economic Association Washington, DC, January 6-8, 1995 (May 1995): 89.

⁶ Theodore E. Keeler, Teh-Wei Hu, P. Barnett, W. Manning, and H. Sung, "Do cigarette producers price-discriminate by state? An empirical analysis of local cigarette pricing and taxation," Journal of Health Economics (1996): 499.

opposed to when there were no campaigns.⁷ Therefore, tax increases on tobacco are an additional effect of the campaigns and further result in less smoking. Hu, Sung and Keeler collected data on the sales of cigarette tax stamps, focusing on the changes in the price of the stamps over time and data on cigarette sales in number of packs per capita. Hu et al agree with Warner, as their study shows that state taxes are very effective in lowering cigarette consumption.⁸ If the government would like to persist in decreasing the use of cigarettes, continuing to raise taxes may be one of their best options.

The United States government has also passed bills restricting smoking in certain public areas, continuing to discourage smokers. Currently, forty-seven of the fifty United States have laws restricting smoking in public places, all fifty states have laws restricting smoking in government buildings and forty states have laws restricting smoking in private work places. Sixteen states, as well as the District of Columbia, prohibit smoking in most public places and workplaces, which includes bars and restaurants. Other states currently prohibit smoking in restaurants only, but some have plans to go smoke-free in bars within the next year.⁹ Therefore, all United States citizens who smoke are restricted in some way as to where they are permitted to smoke. Bardsley and Olekalns contend that smoking regulations, such as in the work place, lower consumption rates by up to five percent.¹⁰ If states continue with their plans to go smoke-free, these rates will only increase, showing just how efficient government regulations are.

⁷ Warner, "The Effects of the Anti-Smoking Campaign...", 648.

⁸ Teh-Wei Hu et al, "The State Antismoking Campaign and the Industry Response...", 86.

⁹ American Lung Association, "Summary Reports: State Laws Restricting Smoking in Public Places and Workplaces," available from <http://slati.lungusa.org/appendixa.asp>; Internet; accessed on Nov. 9, 2007

¹⁰ Bardsley and Olekalns, "Cigarette and Tobacco Consumption...", 238.

Goel and Nelson focus on government efforts, such as non-price controls, to reduce the levels of smoking. They point out that after the 1971 ban of cigarette advertisements in broadcast media, the cigarette companies' spending simply went to an increase in all other areas of advertisement. Cigarette companies often promote through coupons and in-store displays, in addition to limited media coverage. The decrease in media spending simply has gone instead to advertising in sports arenas and in stores, most commonly.¹¹ In contradiction with most other studies, Goel and Morey find that advertising bans help to lessen consumption.¹² This contradicts the previously discussed study by Bardsley and Olekalns. Holak and Reddy find that advertising bans, instead of decreasing consumption, make it more difficult to compete within the industry. They believe that a ban on advertisements is not successful in reducing consumption and that other methods should be used instead.¹³ Cigarette companies agree with Holak and Reddy's results, believing that advertisements are used purely to define brands. More on this topic will be addressed in the following theory chapter.

A third important aspect to cigarette consumption is health information. Most people are aware that there are risks associated with smoking cigarettes, but exactly how much do they know and how much does this information influence their decision to smoke? Hamilton discovers that a health scare lowers cigarette consumption far more than cigarette advertisements increase sales. This information was discovered through a

¹¹ Rajeev K. Goel and Michael A. Nelson, "The Effectiveness of Anti-Smoking Legislation: A Review," Journal of Economic Surveys (July 2006): 330.

¹² R. K. Goel and M. J. Morey, "The interdependence of cigarette and liquor demand," Southern Economic Journal (1995): 459.

¹³ Susan L. Holak and Srinivas K. Reddy, "Effects of a Television and Radio Advertising Ban: A Study of the Cigarette Industry," Journal of Marketing (Oct. 1986): 219.

1972 study presenting the econometrics of the demand for cigarettes and weighing the consequences of health information to positive advertisement.¹⁴ In addition, Seldon and Boyd find that initial health warnings, such as the Surgeon General's report on health risks in 1964, are much more effective than succeeding reports, such as the Surgeon General's follow-up warnings in 1979.¹⁵ This may suggest that only initial warnings have concerned the general population. Perhaps after the initial shock of a warning has ended, people pay less attention and are less likely to heed future warnings.

However, Bardsley and Olekalns find that health information located on the cigarette packs has only a slight outcome on general consumption.¹⁶ This statement runs true to Bishop and Yoo's examination of the health scare up until 1980. Bishop and Yoo claim that the health scare has little effect on demand. They propose that what actually happens is an upward shift in the supply curve, due to the advertising ban on tobacco in 1971. Production costs increased, along with taxes, and these rising costs had a much larger end result on consumption than any theory related to advertisement and health scares.¹⁷ Through regression models, Yucelt and Kaynak find that smoking-related cancer deaths lessened consumption by .136% for every unit. The study also finds that for every unit change in price, consumption would decrease by .182 %.¹⁸ Bishop and

¹⁴ James L. Hamilton, "The Demand for Cigarettes: Advertising, the Health Scare, and the Cigarette Advertising Ban," The Review of Economics and Statistics (Nov. 1972): 409.

¹⁵ Barry J. Seldon and Roy Boyd. "The Stability of Cigarette Demand," Applied Economics (Feb. 1991): 320.

¹⁶ Bardsley and Olekalns, "Cigarette and Tobacco Consumption...", 238.

¹⁷ John A. Bishop and Jang H. Yoo, "'Health Scare,' Excise Taxes and Advertising Ban in the Cigarette Demand and Supply," Southern Economic Journal (Oct. 1985): 410.

¹⁸ Ugur Yucelt and Erdener Kaynak, "A Study of Measuring Influence of Advertising and Forecasting Cigarette Sales," Managerial and Decision Economics (Dec. 1984): 218.

Yoo's and Yucelt and Kaynak's findings show us that perhaps smokers care more about their money than their health.

Viscusi uses a national survey in an attempt to discover the consequences of lung cancer risk perception on cigarette consumption. By asking more than three thousand individuals over the age of sixteen: "Among 100 cigarette smokers, how many of them do you think will get lung cancer because they smoke?" Viscusi is able to suggest that lung cancer risk perceptions are very high. The results of the research show large overestimates as to what lung cancer probability actually is.¹⁹ Therefore, smokers know the risks that they face when lighting up a cigarette and believe their chance for lung cancer is relatively high. Does this mean that smokers generally are not concerned about their health?

Slovic, on the other hand, is not so sure that most individuals do understand the risks of smoking. He disagrees with Viscusi's notion that people know the risks and make the rational choice to smoke. One of the issues that Slovic addresses is that Viscusi asks his sample to judge the risks for one-hundred smokers, but does not ask them the risks to themselves. Slovic believes, based on many studies, that people believe their own risk is always less than the risk of others. His study finds that young smokers, such as teenagers, don't see the harm in smoking because they believe they will quit before any harm to their health.²⁰ Therefore, Slovic believes that teenagers underestimate the risks of smoking; they must not be fully informed about the hazards smoking creates for

¹⁹ W. Kip Viscusi, "Do Smokers Underestimate Risks?" The Journal of Political Economy (Dec. 1990): 1255.

²⁰ Paul Slovic, "Do Adolescent Smokers Know the Risks?" Duke Law Journal (Apr. 1998): 1133.

their health. This also suggests that if they were entirely informed, then there may be fewer teenage smokers.

Gallet and Agarwal focus on the changes in the United States' demand for cigarettes. Their results demonstrate that the demand for cigarettes has gradually decreased over time and corresponds to the release of health information related to cigarettes. By observing a long period of time (1961 to 1971), this article helps to demonstrate the gradual change that most other articles describe as immediate.²¹ The importance in recognizing if the change is gradual or immediate is that there may be several different influences on the demand for cigarettes. If the change were immediate, then perhaps only one of the aspects of negative publicity has an effect. A more gradual change may demonstrate that several different influences are responsible for the decrease.

Gallet has also written another, more recent, article about the impact of health information on smoking. The article recognizes that health information shapes the demand for cigarettes but addresses the idea that health information may also be affecting the supply of cigarettes. It supports that supply has decreased because of less competition in the cigarette industry.²² The idea of a lessening supply may correlate with Holak and Reddy's results on advertisement bans, discussed previously. If advertisement bans only reduce competition, then by default the bans may also be decreasing the supply of cigarettes. Health information creates advertising bans, which in turn creates lesser competition, which then creates a lower supply and demand. This also implies that several elements of negative publicity may be related.

²¹ Craig Gallet and Rajshree Agarwal, "The Gradual Response of Cigarette Demand to Health Information," Bulletin of Economic Research (July 1999): 259.

²² Craig A. Gallet, "Health Information and Cigarette Consumption: Supply and Spatial Considerations," Empirica (2006): 35.

Goel and Morey incorporate the idea of additional variables affecting the need for cigarettes. Their study finds that cigarettes and alcohol can be named as substitutes for each other, and therefore if alcohol prices increase, such as by increased liquor taxes, then this would create a stronger demand for cigarettes.²³ If Goel and Morey's theory is accurate, there may be additional goods, other than alcohol, that have not yet been discovered and also influence the demand for cigarettes.

After studying the previous articles, it is clear that there is room for further investigation of this subject. While previous research looks into many of the same issues that this thesis will address, it is very contradictory. From this review of literature it is already possible to see how bad publicity can create additional negative aspects for the cigarette industry (i.e., anti-smoking campaigns triggering government reaction to raise taxes, which in effect increases the price of cigarettes). This thesis will attempt to discover more recent investigations of the topic and find more concrete answers as to what effects negative publicity has on cigarette consumption.

Further exploration of this topic leads us to our next chapter—a discussion of three theories which pertain to this thesis. The theories include marketing, rational choice and the economics of addiction. Each theory adds supplementary information crucial in understanding all aspects of this thesis. These theories relate to the literature just reviewed, as well as to this thesis' discovery of new data.

²³ Goel and Morey, "The interdependence of cigarette and liquor demand," 456.

CHAPTER III

THEORY

Understanding several different theories allows for a full comprehension of this thesis. This chapter examines three different theories pertaining to the discussion of negative publicity and cigarette consumption. The first theory addresses marketing or, more specifically, advertising. Marketing creates both positive and negative publicity for the cigarette industry. Rational choice, the second theory addressed, asks the question: does a cigarette smoker rationalize his or her decision to smoke? Lastly this chapter considers the economics of addiction, a theory which greatly relates to rational choice. An examination of these three theories helps to gain better insight into the discussion of cigarette consumption and of the effects that negative publicity has on consumption.

Marketing began “as a brand of *applied economics* devoted to the study of distribution channels,” later becoming “a *management discipline* devoted to engineering increases in sales.”¹ Today, marketing “has taken on the character of an *applied behavioral science* that is concerned with understanding buyer and seller systems involved in the marketing of goods and services.”² All products require marketing in order to advertise, distribute and gain understanding about what the consumer is looking for in the product. Without marketing it would be hard for the supplier to convey what is

¹ Phillip Kotler, “A Generic Concept of Marketing,” Journal of Marketing (Apr. 1972): 46.

² Kotler, “A Generic Concept of Marketing,” 46.

being offered and hard for the consumer to choose what to buy. Marketing helps to connect the product to the need of the consumer.

Marketing covers several principles; one of the largest aspects, advertising, is closely connected to this thesis. According to Kotler, in the skill of promotion “the marketer must be capable of stimulating market interest in the product.”³ Advertising more readily allows the consumer to become familiar with the product name through print, television, radio and more. It also aids in separating brands of the same product. Each brand then has the ability to establish its own identity and create its own clientele. Therefore, as there are several different options for cigarette smokers, advertising helps each brand create its own consumers.

The surrounding culture of a product greatly influences advertising. In an attempt to adapt to that culture, one product’s advertising may change depending on where it is being sold and to whom. A look at advertisements from fifty years ago reveals how advertisements were much different; culture and society today are much different than culture and society years ago. To promote a positive brand image, companies must advertise their product in the way they believe their customers wish to see it, therefore maintaining the images of an updated culture.⁴ White suggests that “advertising can help to select and reinforce certain values and needs inherent in the role of the product... [operating] within the limits of culture to create new expectations for the consumer.”⁵ He continues, “the function of advertising is to create strong sub-categories of values and

³ Kotler, “A Generic Concept of Marketing,” 52.

⁴ Irving White, “The Functions of Advertising in Our Culture,” Journal of Marketing (July 1959): 10.

⁵ White, “The Functions of Advertising in Our Culture,” 10.

needs within the social structure, and to associate these with the product.”⁶ The consumer is then able to choose the brand that he or she identifies with best.⁷ After a buyer selects a brand, further advertising will maintain the person’s loyalty or may attract the buyer to try a new brand next. Advertising is extremely important in forming a connection between the product and the buyer.

All aspects of marketing are easily related to the cigarette industry. Just as with any other industry, product or brand, it is important to understand the consumer and be able to relate to the consumer by discovering his or her needs and desires. In contrast to most other industries, there are laws and regulations on the advertising of cigarettes. With such restrictions, it is harder for cigarette companies to advertise cigarettes in the way they may wish.

According to Tye, Warner and Glantz, in the 1970s cigarettes were the most advertised product in the United States. Health organizations made attempts to eliminate tobacco advertising completely, and tobacco industry representatives claimed that advertisements did not increase consumption but merely created brand preferences for the consumers. “Cigarette manufacturers insist that advertising and promotion serve only to retain brand loyalty and encourage brand-switching.”⁸ Tye, Warner and Glantz beg to differ with these manufacturers, claiming that there is evidence that the promotion of cigarettes increases tobacco consumption.⁹ While the two views differ, it is certain that

⁶ White, “The Functions of Advertising in Our Culture,” 10.

⁷ White, “The Functions of Advertising in Our Culture,” 11.

⁸ Joe B. Tye, Kenneth E. Warner, and Stanton A. Glantz. “Tobacco Advertising and Consumption: Evidence of a Causal Relationship,” Journal of Public Health Policy (Winter 1987): 494.

⁹ Tye et al, “Tobacco Advertising and Consumption...” 494.

advertisements are needed to distinguish between brands. Whether or not the advertisements increase sales is controversial.

To maintain the smoking population, Tye, Warner and Glantz declare that every year the cigarette industry needs to attract roughly two million new smokers to replace those who have quit smoking or have died. Most of these replacements are children.¹⁰ So, if advertisements are strictly for those who smoke already, as the industry claims they are, how are there roughly two million new smokers every year?

Tye, Warner and Glantz discuss several studies that show an increase in consumption of cigarettes due to advertising. One study found that cigarette advertising increases demand during the time of the advertisements and also that it increases demand following the advertisements. Econometric studies show that if cigarette advertising were eliminated completely, per capita consumption would decrease by five percent in just the first year and then continue to decrease in every year following. A study from the 1960s demonstrated that for every dollar spent on advertising there would be an increase in sales of six-hundred cigarettes.¹¹ Cigarette promotions often portray the glamorous lifestyle of smokers, in an attempt to say that this could be your life if you smoked cigarettes. It seems clear that advertising for cigarettes increases sales and is not just used for those who already smoke, as advertisements commonly increase sales no matter the industry. The bans on advertising, established and expanding since 1970, create struggles for cigarette companies. These bans create clear detriments to the marketing aspects of cigarette companies.

¹⁰ Tye et al, "Tobacco Advertising and Consumption..." 493.

¹¹ Tye et al, "Tobacco Advertising and Consumption..." 497.

Marketing for anti-smoking campaigns creates further detriments to cigarette companies. Just as marketing usually benefits any company, it benefits these campaigns in the same way. Advertisements for these campaigns, on the other hand, *are* allowed on the television and radio, as well as through any other marketing system. The truth® campaign claims that “seventy-five percent of all 12 to 17 year-olds in the nation – 21 million – can accurately describe one or more [of their ads].” Eighty-five percent of these youths say that the ads gave them enough reason to not smoke.¹² So, while the tobacco industry can boost sales with advertisements, they are up against advertisements encouraging people to never start smoking and to quit smoking if they already do. In this case, marketing works for and against the tobacco industry.

This thesis centers generally around the key theory of marketing. The previous assessment of marketing and advertising helps to gain an understanding to the thesis question. Understanding what publicity is becomes crucial when asking how negative publicity affects cigarette sales. Publicity is frequently generated through marketing, specifically advertising. As has been examined, especially in the case of the cigarette industry, not all publicity is good for a product. Advertising may also portray a product pessimistically, and because cigarettes are so often shown in a negative light, the theory of negative publicity and advertisement is vital to this thesis, since it explores the impact that negative advertising has on cigarette consumption.

This chapter next addresses the theory of rational choice, a branch of logic that “provides criteria for assessing the consistency of choices and for deriving new choices

¹² Protect the Truth. “truth® Campaign,” available from http://www.protectthetruth.org/truth_campaign.htm; Internet; accessed on Nov. 13, 2007.

from existing ones.”¹³ Not every reason for doing something may be considered rational. Allingham suggests that it may be considered rational if there is a transitive reason.¹⁴ For example, a person may believe smoking is rational by claiming that it calms his or her nerves and therefore allows him or her to focus and perform tasks better throughout the day. A model of social and economic behavior, rational choice theory helps to define good reason behind a choice made by one individual. Individuals commonly make decisions based on their interests and therefore seek to benefit in some way from their choice. Therefore, persons who make the decision to smoke must recognize at least one benefit that smoking will provide to them. Perhaps then, any negative publicity that a smoker does encounter remains insignificant due to the benefits perceived.

Addiction should also be considered along with the rational choice theory, due to the fact that cigarettes contain nicotine, an addictive substance. Addiction can be addressed in two different ways, as either rational or myopic. Chaloupka¹⁵ helps to distinguish the differences between the two models. Rational models differentiate addictive consumption from regular consumption by establishing that when addictive goods are being considered, current consumption depends on past consumption.¹⁶ Therefore, myopic models do not consider current consumption when determining future consumption. Researchers examine how an addict to cigarettes behaves, either myopically or rationally. An addict who acts myopically “accounts for the dependence of

¹³ Michael Allingham, Rational Choice (New York: St. Martin’s Press, Inc., 1999): 1.

¹⁴ Allingham, Rational Choice, 5.

¹⁵ Frank Chaloupka, “Rational Addictive Behavior and Cigarette Smoking,” The Journal of Political Economy (Aug. 1991): 722.

¹⁶ Chaloupka, “Rational Addictive Behavior and Cigarette Smoking,” 723.

current addictive consumption on past consumption but ignores the dependence of future consumption on current and past consumption when making current decisions.”¹⁷ If instead, it is believed that the addict is rational, then the addict is “aware of and [accounts] for the interdependence of the past, current, and future consumption when making current consumption decisions.”¹⁸ Cigarette addiction develops the habit of smoking cigarettes because they contain the addictive substance nicotine.

By developing cigarette demand equations, Chaloupka is able to support the idea that smoking cigarettes is addictive. He also incorporates the ideas of tolerance, reinforcement and withdrawal into his model. Tolerance is the notion of having a lesser response level for the amount of addictive substance that is consumed. Reinforcement is the idea that a person gains some benefit by consuming the addictive substance, such as the relaxation that smokers gain when having a cigarette. Withdrawal includes the effects that occur when an individual ceases using the addictive substance. Even further, Chaloupka supports the idea that smokers are myopic.¹⁹ Because cigarettes are addictive, an addicted person will crave cigarettes and not be satisfied until the craving is met. The more cigarettes consumed, the more a person will want because of the tolerance for cigarettes that the person has established. Even if a smoker understands the risks of smoking, ideas of reinforcement may offset any fears or concerns regarding the person’s health. If a person does find enough reason to quit smoking, and they are addicted, they will experience withdrawal. The smoker’s body has been accustomed to the nicotine and

¹⁷ Chaloupka, “Rational Addictive Behavior and Cigarette Smoking,” 725.

¹⁸ Chaloupka, “Rational Addictive Behavior and Cigarette Smoking,” 725.

¹⁹ Chaloupka, “Rational Addictive Behavior and Cigarette Smoking,” 723.

is unfamiliar with its absence. If the smoker does not decide to quit, the addiction will grow stronger and the body will continue to grow more tolerant.

Rational addiction is addressed by Becker and Murphy, who conclude that the people who are more likely to become addicted are those who “discount the future heavily.”²⁰ Other factors include income levels, stressful events and the level of prices. Becker and Murphy explain that for addictive goods the long-run demand is more elastic than that of the demand for non-addictive goods. The drive to quit addictive behaviors such as smoking is seen as very rational. Very strong addictions usually end by sudden and immediate withdrawal, better known as going “cold turkey.” Becker and Murphy go on to explain that “cold turkey is consistent with rational behavior” and “rational persons end strong addictions only with rapid [reductions].”²¹ Baltagi and Griffin discuss Becker and Murphy’s theoretical model about consumers who become addicted to a product. The theory indicates that “consumers are rational in the sense that they anticipate the expected future consequences of their current actions.”²² This suggests that a smoker understands the health risks involved in their habit. Smokers anticipate the risks, therefore continuing to smoke although knowing it is dangerous for their health. A smoker must rationalize the consequences to come and accept them. Therefore, Baltagi and Griffin demonstrate their support for the rational-addiction hypothesis.

Addiction theories are significant in discussing cigarette consumption. Cigarettes contain an addictive substance and therefore a consumer will commonly continue to

²⁰ Gary S. Becker and Kevin M. Murphy, “A Theory of Rational Addiction,” The Journal of Political Economy (Aug. 1988): 694.

²¹ Becker and Murphy, “A Theory of Rational Addiction,” 695.

²² Badi H Baltagi and James M. Griffin, “The Econometrics of Rational Addiction: The Case of Cigarettes,” Journal of Business & Economic Statistics (Oct. 2001): 449.

purchase and use cigarettes. Negative publicity may not be a factor for some individuals who smoke. For a person addicted to cigarettes, addiction may be enough for him or her to continue consumption, and therefore negative publicity may not affect cigarette use at all. Addiction would instead increase consumption, and any other factors, such as government regulations and health information, may not be a concern for the smoker.

Marketing, rational choice, and addiction are all essential theories in the discussion of this thesis. Advertising helps to establish a relationship between the product and the consumer, although publicity isn't always the best or easiest thing for an industry. The tobacco industry must face advertising bans and attempt to overcome the negative publicity portrayed by anti-smoking campaigns. On the other hand, anti-smoking campaigns are not always successful and do not capture all of the tobacco industry's clientele. Due to the nicotine in cigarettes, consumers become addicted, keeping the industry's consumption rates high. The theory of addiction also comes into play in the theory of rational choice. Cigarette consumers must see benefits that smoking brings to their own lives, rationally or myopically.

The next chapter will attempt to answer a few of the questions that arose in the review of literature and the discussion of theory. It aims to maintain a connection between the previous studies and theories and this thesis, by forming new data. The intent of this thesis is to discover new information on the effects that negative publicity has on cigarette consumption. In order to do so, new data must be collected. Gathering new data will help to update some of the existing information, as much of the previous information is a few years outdated. The results of the data will also help to establish a stance for this thesis. As some of the earlier reports are inconsistent, new information

may allow for this thesis to support specific researchers discussed earlier or may form new ideas not yet established by others.

CHAPTER IV

DATA AND RESULTS

The purpose of this thesis remains in finding an answer to the question: How does negative publicity for cigarettes, such as anti-smoking campaigns, government regulations, and health information, affect the consumption of cigarettes? In an attempt to answer the question a review of previous literature was completed, yet much of it was contradictory. The literature leaves the reader unsure as to what aspects of negative publicity *do* affect cigarette consumption. Therefore, this thesis develops new research in an extended effort to answer the question.

New data were collected through a questionnaire, distributed within Colorado Springs, Colorado. Surveys were hand distributed to local businesses and to students, faculty and staff at Colorado College. The sample collected may be referred to as a convenience sample. Convenience sampling allows the researcher to gather data inexpensively and conveniently. This form of sampling is a non-probability method; the participants are selected by the researcher and therefore cannot represent the population as a whole. Men and women over the age of eighteen were asked to participate in taking the questionnaire. The age of eighteen was chosen due to the fact that only individuals over the age of eighteen smoke legally, although it is recognized that there are many under-aged smokers as well. Refer to Appendix A to view the questionnaire in its entirety.

The questionnaire formulated addresses smokers, non-smokers, and those who have quit smoking, allowing for any individual to complete the questionnaire. After the survey establishes age and gender, participants are asked if they smoke cigarettes, given the options “yes,” “I used to” and “no.” Depending on the participants’ answer, they are instructed to continue to specific page numbers, which contain the questions that they should complete. Therefore, within the questionnaire there are three different questionnaires. Each questionnaire has a different, yet similar, set of questions depending on whether or not the participant is (or was) a smoker.

To answer the thesis question, negative publicity for cigarettes is addressed in the questionnaire. All participants are asked whether or not they have regulations against smoking at work. All participants are also asked how often they frequent establishments that do not allow smoking, such as bars and restaurants. Participants may circle the options of “very often,” “often,” “sometimes,” “rarely” and “never.” These questions act in determining the affects of government regulations on cigarette use. To generalize the affects that anti-smoking campaigns have on cigarette consumption the questionnaire asks how many anti-smoking advertisements the participant is exposed to every week. The questions continue on to specify how many of these advertisements are in print, on television, or on the radio. Also important in understanding the affects of anti-smoking campaigns is grasping the effect that such campaigns have on the person exposed to the campaign. Therefore, the questionnaire asks if the advertisements respondents have been exposed to provide them with any information that they were not previously aware of. Participants answer on a scale including: “strongly disagree,” “disagree,” “slightly disagree,” “slightly agree,” “agree” and “strongly agree.” The purpose of this question is

to determine if the commercials actually benefit their cause or if they have just simply been viewed. To obtain data on health information related to cigarette smoking, participants are asked if they are aware of the health risks associated with smoking cigarettes, again on a scale from “strongly disagree” to “strongly agree.”

While participants are asked generally the same questions, a few of the questions vary depending on whether or not the participant is a smoker. Smokers are asked how often they smoke every day, including how many packs of cigarettes they consume per week. In the category of government regulations, if the participant has smoking regulations at work, he or she is then asked if the regulations affect their smoking habits, given the options “no change,” “slightly limits smoking,” “greatly limits smoking” and “has forced me to stop smoking.” In the category of anti-smoking campaigns, smokers are also asked if anti-smoking advertisements lead them to believe that they should quit smoking. Next, smokers are asked about their own health. Are they concerned that their own health may be affected by smoking cigarettes? Further, are they concerned that they may affect another individual’s health by smoking cigarettes? Participants are then asked if they have ever considered quitting smoking. All four questions are again asked on a “strongly disagree” to “strongly agree” scale. Then in further questioning about whether or not smokers have considered quitting smoking, participants are asked to write about why or why not. Lastly, smokers are asked if anyone they know has tried to convince them to quit smoking, and if they have, why?

The questionnaire for those who used to smoke also has a few questions that vary from the other surveys. Similar to the smokers’ survey, participants who have quit smoking are asked how many times per day they used to smoke and how many packs of

cigarettes they consumed weekly. If they had smoking regulations at work when they were smokers, did these regulations affect their smoking habits? Also, did the regulations help them to make the decision to quit smoking? These questions help to establish any effect that bans on smoking in the workplace may have on smokers. In the section of questions on anti-smoking campaigns, persons who have quit smoking are asked if the advertisements had led them to believe that they should quit smoking. They are also asked if they were concerned about their health or any other person's health while they smoked cigarettes. All of the above questions on anti-smoking are asked on a scale from "strongly disagree" to "strongly agree." Lastly participants are asked if anyone they knew tried to convince them to quit smoking, and why.

Those who do not smoke are asked if they had ever smoked a cigarette and on a scale from "strongly disagree" to "strongly agree" are asked if they have ever considered smoking. Then they are asked what made them decide that they didn't want to smoke. Participants have the option to circle all answers that apply: health risks, too expensive, convinced not to by others, and didn't enjoy it. Or participants are invited to write in any other or additional reason. Again, on a scale from "strongly disagree" to "strongly agree" those who do not smoke are asked if anti-smoking advertisements reassure them that they do not want to smoke. Finally, participants are asked if they have ever tried to talk to a smoker they know about quitting and to write about why or why not. If they have tried to talk to someone, did the person quit smoking? Why or why not?

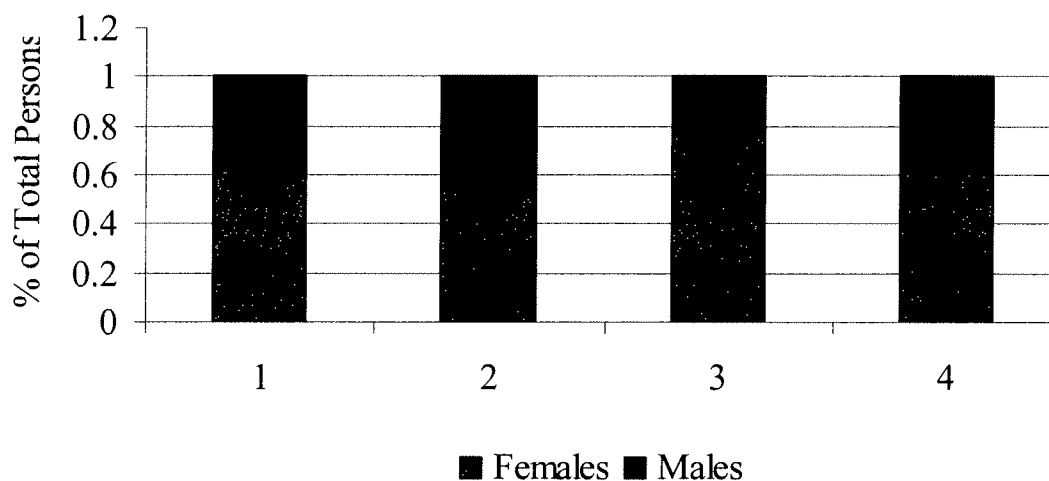
One hundred and fifty questionnaires are distributed to persons living or working in Colorado Springs, with a return rate of seventy-one percent; one hundred and six surveys are completed. Of these completed surveys, sixty-six respondents are females

and the remaining forty are males. The oldest participant is seventy years of age and the youngest is eighteen years of age. The average age of those surveyed is thirty-one years old.

Next, the participants are divided into three sub-categories: smokers, those who have quit smoking, and non-smokers. Within these three categories we can again define age and gender of the group. Refer to Figure 4.1 to view the percentages of males and females surveyed.

FIGURE 4.1

GENDER OF PERSONS SURVEYED



- 1: Persons Surveyed
- 2: Smokers
- 3: Those Who Have Quit Smoking
- 4: Non-Smokers

Thirty-two smokers, twenty-five persons who have quit smoking and forty-nine non-smokers finished the questionnaire. Of the smokers, seventeen are females and fifteen are males. For those who have quit smoking, nineteen are females and six are males and of the non-smokers thirty are females and nineteen are males. The average age of the

smokers is thirty-four years old. Average age for those who have quit smoking is thirty-two years old and the average age for non-smokers is twenty-eight years old.

I. RESULTS OF SMOKER'S PORTION OF THE QUESTIONNAIRE

The first presentation of data covers the smoker's segment, with thirty-two persons' responses. For the question on how often the person smokes, 16.0% said one to four times daily, 37.5% said five to seven times daily, 28.0% said nine to twelve and 9.0% replied seventeen to twenty times daily or twenty-five or more times daily. How many packs a week? Respondents ranged across the board, but most frequently answered one to three packs or four to six packs.

Smokers then answer questions about government regulations. Twelve smokers do have smoking regulations at work, while the remaining twenty do not. For those who do have regulations at work, 67.0% say that the regulations slightly limit their smoking habits and 33.0% declare that the regulations greatly limit smoking. Attendance in non-smoking establishments is high, with 46.9% often frequenters and another 21.9% frequenting very often.

Twenty-five percent of smokers are exposed to five to six anti-smoking advertisements every week. Just fewer than 22.0% are exposed to three to four of these advertisements, as well as an additional 22.0% exposed to seven to eight anti-smoking advertisements every week. Only nine percent of smokers declare that they are exposed to no anti-smoking commercials. Of the 91.0% who are exposed to these advertisements, the most frequent exposure is through television. One-hundred percent of the 91.0% see at least one anti-smoking advertisement on television every week; 51.7% view one to two, 17.2% view three to four, 13.8% view five to six, 10.3% view seven to eight, 6.90%

view nine to ten and no participants viewed eleven or more. While 44.8% hear an advertisement against smoking on the radio one to two times a week, 31.0% never hears them at all. Nearly, fourteen percent hears three to four weekly, with no advertisements heard more than seven to eight times a week. In print, such as newspapers and magazines, 37.9% see or read one to two anti-smoking commercials every week. Another 24.1% views three to four every week, yet 17.2% claim they never see the print ads. Ten percent sees five to six of the ads and an additional 10.0% declares that they view eleven or more.

With 91.0% seeing or hearing at least one anti-smoking advertisement every week, do the ads influence smokers' lives at all? While only 91.0% claim that they see a certain number of ads every week, 100.0% of the participants answered further questioning on anti-smoking campaigns. This may suggest that while they do not see enough for their exposure to constitute as weekly, they have seen or heard at least one in the past. Twenty-five percent strongly disagree with the statement that anti-smoking advertisements provide them with information they are not previously aware of and another 43.8% disagreed with the statement. Only 15.6% agree and 6.25% strongly agree, with still another 9.38% slightly disagreeing. In response to the statement that anti-smoking advertisements lead participants to believe that they should quit smoking, the responses are slightly more diverse; 12.5% strongly disagree, 18.8% disagree, 9.38% slightly disagree, 31.3% slightly agree and 28.1% agree.

Health related questions have the most recurrent responses for smokers. Are smokers aware of the health risks associated with smoking? Almost 69.0% agree that they do in fact know the risks and even further, the remaining 31.0% strongly agree with

the statement. When smokers are asked if they are concerned that their own health may be affected by smoking cigarettes, 91.0% answer within the agree range; 18.8% slightly agree, 62.5% agree and 9.38% strongly agree. In consideration of the health of other individuals, 37.5% slightly agree that they are concerned that by smoking cigarettes they may affect another person; another 34.4% agree and 9.38% strongly agree. A much lower 12.5% disagree, believing that smoking will not concern anyone else's health.

Finally, smokers respond to the statement: I have considered quitting smoking. One hundred percent of the replies indicate that quitting the habit has been considered by all; 12.5% slightly agree, while the remaining 87.5% are split in half between agree and strongly agree. Finally, one hundred percent of the smokers said that, yes, someone they know has tried to convince them to quit smoking.

II. RESULTS OF QUITTER'S PORTION OF THE QUESTIONNAIRE

Next to be reviewed is the data taken from the portion of the survey dedicated to those who have quit smoking. These individuals' most frequent response for how often they used to smoke is one to four times a day, with 48.0%. Other participants range from five to eight times daily to twenty-one to twenty-four times daily. Again, packs of cigarettes consumed weekly range from one pack to fifteen packs.

Almost split down the middle, 48.0% have or had smoking regulations at work, while 52.0% do or did not. Of the 48.0% that had smoking regulations at work, while they were smokers, 50.0% say that there was no change to their smoking habits due to the regulations and the other 50.0% declare that the regulations only slightly limited their smoking. Also, out of the 48.0% that had regulations at work, 41.7% strongly disagree that the regulations helped them in their decision to quit smoking. Another 8.33%

disagree with the statement and the remaining 50.0% are evenly split between slightly disagreeing and slightly agreeing. As for frequenting establishments that do not allow smoking, 28.0% frequent them very often, 56.0% frequent them often and 16.0% frequent them sometimes.

Those who have quit smoking have a broad range of answers related to anti-smoking ads. Every week, 12.0% observe no advertisements, 36.0% observe one to two, 4.0% observe three to four, 20.0% observe five to six, 16.0% observe seven to eight, another 4.0% observe nine to ten and 8.0% report observing twelve or more. Of the 88.0% that are exposed to one or more advertisements every week, again most of these are on television. Data indicates that only 4.5% of this group sees none of the advertisements on television and that 40.9% see one to two each week on television. Thirty-six percent views three to four each week, with the remaining 18.0% viewing anywhere from five to ten of the ads. While 22.7% spot none of the advertisements in print, 68.2% see one to two and 9.0% view either three to four or five to six. An alarming 72.7% do not hear any commercials for anti-smoking campaigns on the radio and only 13.6% hear one to two every week, with another 13.6% hearing three to four. In regards to whether or not any of the advertisements provide them with information they do not already know, 76.0% did not support this statement. Thirty-six percent strongly disagree, 8.0% disagree, 32.0% slightly disagree and only 12.0% slightly agree and another slight 12.0% agree. Anti-smoking advertisements did not generally lead those who have quit smoking to quit. Forty percent strongly disagree that anti-smoking advertisements had an influence on their decision to quit smoking, with a further 24.0%

who disagree. Only two percent slightly agree with the statement and sixteen percent agree.

When health information is considered, those who have quit smoking seem to be in conformity. Thinking back to when they were smokers, 60.0% of those who have quit strongly agree that they understood the health risks of smoking. Twenty-eight percent agree that they knew the risks, with the remaining twelve percent in slight agreement. Understanding the health risks, those who have quit smoking display they had apprehensions about their own health as smokers. Ninety-two percent answered within the agreement scale; 28.0% strongly agree, 52.0% agree and 12.0% slightly agree, with only 8.0% slightly disagreeing. Contributors were slightly less concerned about affecting another individual's health. When asked if they thought their own smoking might affect another person's health a more dispersed scale showed that only 16.0% strongly agree, 44.0% agree, 8.0% slightly agree, and the remaining 32.0% answered on the disagree spectrum of the scale. Lastly, 64.0% percent state that someone they know tried to convince them to quit, while the other 36.0% say that no one tried to get them to quit.

III. RESULTS OF NON-SMOKER'S PORTION OF THE QUESTIONNAIRE

Finally, we review the data collected for non-smokers, a total of forty-nine surveyed. Sixty-nine percent of the non-smokers assessed have smoked a cigarette at least once in their lifetime. Yet 51.0% strongly disagree that they have ever considered smoking in the past. Another 18.0% disagree that smoking has been a considered for their lifestyle, but 26.0% either slightly agree or agree. So what was the decisive factor when these individuals decided they did not want to become smokers? Just under 82.0% state that the health risks were a deciding factor. Fourteen percent thought that the habit

was just too expensive, 10.0% were convinced not to by others and 40.0% of the respondents simply did not like smoking when they tried it.

The portion of the survey devoted to government control shows that 65.0% of the non-smokers do have smoking regulations in the workplace. Also, 67.3% of non-smokers frequent establishments that do not allow smoking very often, with an additional 22.4% often utilizing these institutions.

Anti-smoking advertisements are viewed often, according to non-smokers, as only 4.1% claim they are not exposed to any advertisements on a weekly basis. Almost 35.0% detect one to two every week, 30.6% detect three to four, 10.2% detect five to six and another 10.2% is exposed to seven or eight ads every week. Even further, 4.1% observe nine to ten and 6.0% notice eleven or more weekly. Once again, television provides for most of these anti-smoking advertisement views. Fifty-one percent see one to two of the ads on television every week and 23.0% view three to four. Radio commercials are least frequently heard, as 70.0% never hear ads on the radio. While 25.5% also do not see any of the advertisements in print, 53.2% see one to two and 17.0% see three to four in print weekly. Anti-smoking advertisements seem to introduce information to non-smokers about half of the time. In fact, 51.0% replied on the disagree spectrum and 49.0% replied in some form of agreement. Do anti-smoking advertisements reassure non-smokers that they do not want to smoke cigarettes? Twenty percent of non-smokers strongly agree with this statement, with an added 34.7% who agree and 16.3% who slightly agree.

Non-smokers generally agree about health information in relation to smoking cigarettes. Sixty-nine percent strongly agree that they are aware of the health risks associated with smoking. With 26.5% who also agree, only 4.0% believes that they are

not informed on the dangers of smoking. As many of the participants know smokers, 77.6% assert that they have tried to talk to a smoker they know about quitting. Of that 77.6%, 76.3% of the people participants tried to get to quit have not.

This chapter provides an in depth presentation of the numbers associated with the data collected. These percentages are important in understanding the effects of negative publicity on cigarette consumption. The subsequent chapter will help in understanding what these numbers mean. Results will be compared and contrasted to analyze the questionnaire to the fullest extent and begin to answer many of the questions that have arisen through the previous chapters. The following discussion will help to clarify which aspects of negative publicity have an affect, if any at all.

CHAPTER V

ANALYSIS

Analysis of the data will begin by examining each of the three groups: smokers, those who have quit smoking and non-smokers. By analyzing the groups separately we gain insight into the effects of negative publicity, determining which group, or groups, is affected by which aspect, or aspects, of negative publicity. Then the three separate analyses are compared and contrasted to find the similarities and differences within the groups. Next a collection of the data from each group will demonstrate the findings of the survey population as a whole. By discussing the data from the previous chapter we can find meaning in the numbers. Finally, we can answer the thesis question and discover which, if any, aspects of negative publicity affect cigarette consumption.

First: the analysis of negative publicity from the smoker's perspective. The questions that reference government policy ask participants about their workplace and establishments that they frequent. Only 37.5% of smokers have regulations against smoking at work, but 100.0% of these people *are* affected by the regulations. Sixty-seven percent declare that the regulations slightly limit smoking and the remaining segment declares that the regulations greatly limit smoking. It seems clear, through these results, that **reducing the opportunities for smokers to smoke at work is an effective means of decreasing cigarette consumption.** If the government believes that a reduction in cigarette smoking is best, then an attempt at creating more workplace

smoking bans should be put into play. If the 37.5% who have regulations at work are all forced to limit their smoking, then there is a good chance that the remaining 62.5% would also be forced to limit their smoking if regulations were put in place.

The matter of government regulations also covers the frequency at which non-smoking establishments are used by smokers. Sixty-nine percent of smokers visit non-smoking establishments either often or very often. Not all establishments in Colorado Springs are smoke-free, so while other choices may be limited, a large percentage of smokers still utilize non-smoking restaurants, bars, et cetera, and do so often. Only 6.25% claim that they never visit institutions that forbid smoking. Therefore 93.75% of smokers are prevented from smoking when they go out, even if only the slightest bit. **If laws regulating all public establishments are put into effect, then even more smokers will be forced to reduce their cigarette consumption.**

Anti-smoking campaigns are seen often by smokers, with only nine percent claiming they are not exposed to any of the advertisements on a weekly basis. Seventy-eight percent do not agree that anti-smoking ads provide them with any new information. Is it still worth it for anti-smoking companies to be providing only 22.0% of smokers with information they didn't already know? Should they instead be spending some of their money on new studies, in an attempt to discover what nobody knows and therefore be able to provide everyone with new facts on the detriments of smoking? On the other hand, 59.4% believe that the anti-smoking commercials they view lead them to believe they should quit smoking. Perhaps the simple push to quit that smokers get from the ads is enough reason to keep the ads running. **Although smokers assert that they already**

know the information provided by anti-smoking advertisements, hearing it on a weekly basis may be the reinforcing factor they need.

Anti-smoking advertisements most commonly provide the viewer or listener with health information that one would expect to turn a smoker off smoking. If smokers have already declared that the ads present them with no new information, then it should be no surprise that **100.0% of smokers are in agreement that they know the health risks associated with smoking.** But are smokers at all apprehensive to light up their next cigarette? The survey demonstrates that many smokers in fact do have apprehensions. **All but 9.0% of smokers are worried about the dangers that smoking will have on their health** and the 9.0% are only slightly unconcerned. This could mean that further reinforcement from outside sources, such as anti-smoking campaigns, could push them into the slightly concerned group, as they seem to be just on the edge. Smokers are also worried about the other people that their habit may affect, but slightly less so than their own health. This could be because they believe the dangers of smoking are much more pertinent to the smoker alone, or because they are simply more concerned about their own health than the health of those around them.

Mostly because of these health concerns, **100.0% of the smokers who responded to the survey have considered quitting smoking** and have been spoken to by someone they know, in attempt to get them to quit. When asked why they would want to quit smoking, a few of the smokers wrote: “I need to quit to save my health,” “I hate the habit, it makes me out of breath and food just doesn’t taste as good,” “Too expensive,” “I’m tired of the side effects on my life,” “Felt I should, but it didn’t work so I gave up,” “I enjoy it but it’s bad for my health,” “Because it has no positive effects on

me or those around me,” “I have quit many times over the years but nothing lasts more than a few years,” and “For my wife and children,” among many other responses. In reading these responses, it seems clear that each smoker has a genuine reason why he or she should quit. As they are still smokers, the benefits of smoking must outweigh their motivation to quit.

Further inspiration for quitting is given to 100.0% of the smokers, generated by people that they know. Smokers list a few of the reasons why people in their lives believe they should quit, including: “My family is concerned about my health,” “They don’t want me to die or get cancer,” “They say only dirty people smoke and it has no positive effect on me or those around me,” “Because it is a disgusting habit that negatively affects my family and friends,” “For the athletics I am involved in,” and “Because it is unhealthy for me and my kids.” The smokers’ friends and family list legitimate concerns, which the smokers seem to take into great consideration. Combined with their own desires to quit smoking, it is shocking that these individuals continue to smoke. **The addiction and the benefits smokers feel are received through smoking continue to outweigh the negative health effects portrayed to them through government regulations, anti-smoking campaigns and even by their own friends and family.**

While the smokers discussed above cannot find what it takes to quit smoking, the next collection of individuals surveyed has overcome their past smoking habits. Of those who have quit smoking, 48.0% smoked only one to four times a day. Almost 16.0% of smokers, on the other hand, state that they smoke one to four times a day. This highlights the ideas of addiction; the less you smoke the easier it is to quit and vice versa. While not

everyone who has quit smoking smoked only one to four times a day, it is a significant portion of the people.

Roughly half the people who have quit smoking had smoking regulations at work while they were smokers. Others quit before workplace bans ever started, saying “No [I did not have regulations against smoking at work], this was thirty years ago.” Those who were not allowed to smoke in the workplace declare that there was either no change in their smoking habits or that the ban only slightly limited smoking. These results are unlike that of the smokers’, none of whom said there is “no change” on their smoking habits due to work regulations. One reason for this could be that those who have quit generally smoke less and therefore weren’t smoking as often at work. **Respondents generally do not sense that the workplace bans helped them to quit smoking, so while it limited their ability to smoke, the bans do not seem to have any long-term effects.** It seems appropriate that people who have quit smoking would regularly visit non-smoking establishments, and this remains true for the sample taken.

People who have quit smoking seem to agree with those who do smoke, that **anti-smoking advertisements, for the most part, do not offer any new information.** Even more so, like smokers, those who have quit don’t think that anti-smoking commercials led them to want to quit; a mere 18.0% of quitters agree that the ads were helpful in quitting. Again, is this percentage enough to keep the announcements running?

Health risks once again become a main concern. One-hundred percent of quitters admit they are, to some extent, aware of the health threats that smoking poses. But are health risks the only reason that people quit smoking? These results indicate otherwise. While all but 8.0% concur concerns that their own health was being affected by smoking,

several participants note that this wasn't so while they were smokers. While many of them strongly agree that health is a strong concern now, "back then" there was no concern for their health at all. Those who have quit also were more likely to disagree that they were affecting anyone else's health. This would make sense, especially since they were often barely concerned about their own health as smokers.

Thirty-six percent were able to quit without the influences of friends and family, although the other 64.0% quit for their own reasons, along with the pressures of those close to them. Their decisions to quit smoking are parallel to why the smokers have considered quitting. A few examples of what participants wrote include: "I didn't like the smell, funny...but that's all it was," "I quit drinking, drinking went so good with smoking, after I got the DT's [Delirium Tremens] I gave up both, it took longer to quit smoking," "My children begged me to stop smoking and I got pneumonia and couldn't breathe for almost a week so I went 'cold turkey' and have not smoked since, five years now," "I made the decision, I went to a clinic after smoking over forty years, it was time," "I never smoked very much and I started training for marathons so I quit completely," "It was expensive and became less appealing," "I realized that it was making me sick (coughing, colds, etc.) and I did not like the taste or smell afterwards, my father has been smoking since age sixteen and I see how addicting they can be," "Peer pressure to quit from my friends," "pregnancy," and "I know people who have died from lung cancer and emphysema." Generally, **people quit smoking because of their own health and for their family and friends**. Women, especially, quit smoking when they began to start a family and knew it was wrong to smoke while pregnant. It seems that with enough motive to quit, people can be successful at doing so.

The last set to be analyzed is the non-smokers. A surprising 69.0% of non-smokers have smoked at least one cigarette in their life, leaving only 14.0% of the entire sample to have never smoked a cigarette. Eighty-six percent of the sample population has smoked, displaying the influence the cigarette industry and pro-smoking advertisements have. While 73.5% disagree to some extent that they ever considered smoking, most of them have at least tried a cigarette. So, why didn't they become smokers? **Eighty-two percent maintain health risks as their main, and often only, reason not to smoke.** Fourteen percent claim that the habit is too expensive. Fifty-nine percent of those who have tried a cigarette just simply didn't like it. Others state that they were convinced not to, knew loved ones who had passed away from smoking, hated the smell, or just thought that it was unattractive.

An interesting fact is that **65.3% of non-smokers have regulations against smoking at work; this is the highest percentage of any group.** Perhaps although smokers do not believe workplace bans help them to quit smoking, it prevents non-smokers from starting to smoke. Without these policies, non-smokers may be around cigarette smoke more often and feel more inclined to smoke. Ninety percent of non-smokers frequent establishments that forbid smoking either very often or often. By not being exposed to smoke at home, at work, or the places one goes out to, the idea of smoking is most likely much more distant than it is to other people. If there are so many restrictions on smoking, why would a person want to begin a habit that will immediately be hindered?

Further, in preventing the non-smoker from beginning to smoke, are anti-smoking advertisements. Non-smokers, considerably more than any other group, agree that the

advertisements provide them with new information. This might imply that smokers are in fact more aware of the health risks associated with smoking than non-smokers are.

Smokers are quick to disagree that the ads offer any new information. Because non-smokers do not feel the risks associated with smoking, perhaps they pay less attention to general public knowledge and therefore learn more when browsing through a magazine or watching a commercial during their favorite television show. **Seventy-one percent are reassured by anti-smoking campaigns that they don't want to smoke.** The remaining 29.0% must be satisfied enough in their own reasons not to smoke that the campaigns make no difference to them.

Only 4.0% of non-smokers strongly disagree that they understand the health risks linked to smoking. Again, this small percentage may be merely unconcerned because they are not risks that affect their own, personal life. Seventy-eight percent have tried to convince a smoker to quit. Reasons stated include: "I don't enjoy being around it and it is really bad for them, not to mention bad for me to breathe or my children," "Because I don't want my Mom to die early," "It's bad for them and I care about them," "I don't want cancer from second-hand smoke, they can kill themselves but not me," "Reduces the quality of health," and "I can't stand hanging out with my friends when they smoke...and it jeopardizes their health." **Seventy-six percent of the people non-smokers tried to convince to quit smoking did not try or were unsuccessful; most of the reasons stated were addiction related.**

Twenty-two percent have never attempted to convince a smoker to quit, a few declaring simply because they are not close with anybody who does smoke. Other reasons consist of: "When they are ready they will, if anyone needed support I would

give it,” “It’s none of my business,” “I just thought I would let them do what they want,” “It’s worthless to try and convince them,” and “It’s too addictive to convince them otherwise.” To this 22.0%, persuading a smoker to quit doesn’t seem like it’s worth the battle. Many of the responses display the attitude that it would only be a waste of their time and people can quit on their own if they wish to.

Now that each of the groups have been analyzed separately there are a few additional recognitions made by viewing the data as a whole. These suggestions will offer a bit more insight into answering the thesis question.

First, let’s take a look at the overall effects of government regulations. Fifty-three percent of the sample is not permitted to smoke at work, and while this means that 47.0% is able to, government regulations seem to be off to a good start. Smokers, especially, are aware of these regulations because those who have them are forced to reduce their smoking, at least while at work. Clearly, **the workplace smoking bans are effective in reducing cigarette consumption and if the government would like to continue decreasing consumption, more bans should be put in place.**

The second government regulation tackled by this thesis is the matter of creating non-smoking establishments. Eighty-two percent of all participants claim they visit non-smoking businesses either very often or often. A mere 1.9% never visit non-smoking organizations. This is a very small percentage to begin with, particularly because many of these laws have been developed only in the past few years. **If additional laws are introduced, the small percentage of those who never visit non-smoking establishments may drop even lower.** Smokers may be forced to frequent non-smoking institutions, if they are the only option. Still, currently 42.0% of smokers are very often

or often frequenting these establishments. Because they cannot smoke while utilizing these locations, it is suggested that **public establishment bans are a successful route in lowering cigarette consumption.**

While the influence of anti-smoking campaigns on quitting smoking has been discussed, further analysis will discuss the influence of anti-smoking campaigns on the reduction of cigarette use. The data collected shows that only 7.5% of those surveyed never, or perhaps extremely rarely, view any of the anti-smoking commercials. So with so many people seeing or hearing the advertisements, which method of advertising is the most efficient? Overall, **television emerges as the fore-runner for highest number of exposures.** Each sub-category viewed anti-smoking information on television most regularly. Overall, 45.3% of the participants view the televised commercials at least one to two times a week. Another 22.6% see three to four every week, with other participants seeing up to ten every week. Next, are the print ads, often in magazines and newspapers, which 20.8% of the sample, claim to never see. Print ads do have some success, as 48.1% of respondents read one to two a week. Radio announcements are the least acknowledged, 52.8% claiming to never hear any ads for anti-smoking campaigns on the radio. Twenty-six percent hear an ad on the radio one to two times a week, or about half the amount television and print ads are recognized. With so little recognition anti-smoking campaigns may want to reconsider their spending. Should money towards radio announcements be instead put towards additional television and print ads? It is also important to consider that these numbers are circumstantial to how often the participants watch television, listen to the radio, and read magazines. Television numbers are most

likely higher because people watch television more often than they read or listen to the radio.

One last interesting aspect of the anti-smoking advertisement data is the group which is exposed to the most advertisements. By calculating the maximum number of ads each group views and dividing the number by the total number of people in the group, we get the average number of ads each person is exposed to every week.

Smokers, on average are exposed to 6.4 ads a week, those who have quit smoking are exposed to 4.64 ads a week and non-smokers are exposed to 4.43 ads every week; notice the decreasing pattern. **Smokers notice two more ads every week than both of the other groups.** It may be conceivable that because the ads relate to their own life, they notice them more regularly. People who have quit smoking and non-smokers may be less concerned with, and therefore not always notice, anti-smoking campaigns. **The aim of the campaigns is to get smokers to quit and by capturing the smoker's attention more often than others, campaigns may be successfully getting their message across.**

Lastly, we take a look at the average age of group. The average age for smokers, those who have quit, and non-smokers is as follows, respectively: thirty-four, thirty-two and twenty-eight years old. The difference in age may reference the changing cultures. As time goes on, we learn more and more about the negative aspects of cigarette smoking. This may suggest that the **smokers have a slightly older age group because they became addicted before knowing much about the consequences.** While this may not remain true for all smokers surveyed, it may explain the habits of the older individuals within the group. Those who have quit smoking may represent the time period in which more and more information was released about the harmful side effects

from smoking. Finally, the youngest age group, the non-smokers may realize the dangers and decide to never start smoking. Perhaps similar studies to this one, done several years down the road, will continue to show lower and lower age groups as more and more health information is released.

Overall, we can see the results of each group and how those results compare to those of the other groups. By analyzing the data collected, this thesis suggests that government regulations, anti-smoking campaigns, and health information all influence the decrease in cigarette consumption. Even further than this thesis set out to discover, family and friends have proved to make a large impact on overall cigarette consumption. Friends and family are the most common force, advocating for a smoker they care about to quit. The most common reason a person quits smoking or wants to quit smoking is health related and therefore health information supports smokers' concerns. Government regulations are extremely effective and will only be more so as more are implemented. Lastly, while anti-smoking campaigns may not introduce new information, they certainly reinforce what is already known and are constant reminders as to the dangers of smoking. Cigarette consumption is on a rapid decline and if the above aspects of negative publicity at least remain constant, this thesis suggests that consumption should continue to fall.

CHAPTER VI

CONCLUSION

This thesis supports the hypothesis that all the aspects of negative publicity considered in this study, including health information, anti-smoking campaigns and government regulations, are shown to have an impact on the decrease of cigarette consumption. This theory stems from the review of past studies, present theories, and this thesis' own research.

The literature review demonstrates the conflicting opinions of researchers familiar with the topic. This thesis supports several studies previously reviewed but conflicts with others. First, in support of other studies, is Warner. One of Warner's conclusions states that anti-smoking campaigns decrease consumption, focusing also on radio and television ads. This study agrees that anti-smoking campaigns decrease consumption, by emphasizing the negative effects of smoking. Television ads were proved to be the most successful, although radio announcements appear to be the least effective method of advertising. The data collected for this thesis also agrees with two of Bardsley and Olekalns' positions. They believe that workplace bans and health information are both effective means of reducing cigarette consumption. Workplace ban data supports this, as one hundred percent of the smokers surveyed who had bans say the bans limit their smoking. The number one reason smokers state they want to quit smoking and the number one reason people who have quit smoking state as why they quit is due to the

health risks. Also, most participants believe they are aware of the dangers in smoking. Therefore, this thesis supports Bardsley and Olekalns and Hamilton in declaring that health warnings must decrease consumption rates. Hu, Sung, and Keeler find that negative advertising decreases sales, just as positive advertising increases sales. Their theory runs true to this thesis, as both find all aspects of negative publicity harmful to sales. Lastly, data collected supports the ideas of Viscusi, who deems that smokers know the risks. The results taken from the smoker portion of the questionnaire indicate truth in Viscusi's claim. One hundred percent of smokers agreed that they know the risks associated with smoking and further, ninety-one percent claims to be concerned with their own health due to their addiction. This is a clear indication that smokers do know the threats to their health coupled with smoking and that Slovic's arguments with Viscusi may not be accurate. To refresh, Slovic's main issue with Viscusi is that his data did not ask participants about themselves, only other people. Slovic argues that had people been responding about their own health, Viscusi's results would have differed and shown that smokers instead underestimate the risks to themselves. This research supports Viscusi because the data illustrates people know the risks and *are* concerned for *themselves*.

By supporting the above researchers, the thesis results must then conflict with other researchers, in addition to Slovic. This thesis backs a few of Bardsley and Olekalns' ideas but disagrees with one in particular. Bardsley and Olekalns don't believe that anti-smoking campaigns have an influence on cigarette consumption, while the data of the current thesis indicates otherwise. Another argument is with Seldon and Boyd. They claim that only initial health warnings are successful in reducing consumption. Bishop and Yoo and Bardsley and Olekalns are also in agreement with Seldon and Boyd

on this issue. On the other hand, this study demonstrates that health information, especially new information is very effective in reducing cigarette consumption. More and more people find reason to quit smoking within the health information that they hear; and the more often they hear it the more likely they are to consider quitting. The results of this thesis demonstrate their clear support for some previous studies and a few with others.

The three theories discussed (marketing, rational choice and economics of addiction) can also be related to the results of the questionnaire. The marketing for anti-smoking campaigns is recognized by over ninety-two percent of the population sample at least once a week, if not up to eleven or more instances every week—a huge success. Rational choice is discussed by participants in a review of their smoking habit. Most of those surveyed understand that smoking is harmful to their health but are able to find other, beneficial reasons to continue smoking. Lastly, discussion on addiction is also frequent in the results. Why doesn't a smoker quit? Smokers and friends and family of smokers most commonly respond one word: addiction. Each theory is easily relatable to this thesis and its results.

The questionnaire provided a significant amount data for analysis. With the data we are able to provide new analysis for smokers, those who have quit smoking, as well as for non-smokers. Together, the data provides several ideas on the effects of negative publicity on cigarette consumption. The thesis question is: Does negative publicity for cigarettes, such as health information, anti-smoking campaigns, and government regulations, influence the number of cigarette sales? In conclusion, this thesis suggests that each of the three aspects of negative publicity *do* affect the use of cigarettes. Anti-

smoking campaigns, health information and government regulations all play a part in the continuing decline of cigarette sales.

QUESTIONNAIRE

Age: _____

Gender: _____

Please Circle One:

Do you smoke cigarettes?

Yes

I Used To

No

If you have circled “**Yes**,” please proceed to **pages two and three**.

If you have circled “**I Used To**,” please proceed to **pages four and five**.

If you have circled “**No**,” please proceed to **pages six and seven**.

Thank you so much for your time and cooperation in completing this survey. Your responses are extremely beneficial in obtaining results for this research. If you are interested in obtaining the results, please leave an e-mail address below. Thank you!

E-Mail Address: _____

QUESTIONNAIRE FOR THOSE WHO SMOKE

PLEASE CIRCLE ONE

How often do you smoke (time(s) per day)?

1 - 4 5 - 8 9 - 12 13 - 16 17 - 20 21 - 24 25+

How many packs of cigarettes do you consume per week?

Less than 1 1 - 3 4 - 6 7 - 9 10 - 12 13 - 15 16 - 18 19 - 21 22+

Do you have regulations against smoking at work?

Yes No

If “Yes,” how do these regulations affect your smoking habits?

No change Slightly limits smoking Greatly limits smoking Has forced me to stop smoking

How often do you frequent establishments that do not allow smoking (i.e. bars, restaurants, etc.)?

Very Often Often Sometimes Rarely Never

On average, how many anti-smoking advertisements are you exposed to every week?

None 1 - 2 3 - 4 5 - 6 7 - 8 9 - 10 11+

How many of these advertisements are in print (i.e. newspaper, magazines, etc.)?

None 1 - 2 3 - 4 5 - 6 7 - 8 9 - 10 11+

How many of these advertisements are on television?

None 1 - 2 3 - 4 5 - 6 7 - 8 9 - 10 11+

How many of these advertisements are on the radio?

None 1 - 2 3 - 4 5 - 6 7 - 8 9 - 10 11+

Anti-smoking advertisements provide me with information I wasn't previously aware of.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

Anti-smoking advertisements lead me to believe that I should quit smoking.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

I am aware of the health risks associated with smoking cigarettes.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

I am concerned that my own health may be affected by smoking cigarettes.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

I am concerned that I may affect another individual's health by smoking cigarettes.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

I have considered quitting smoking.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

Why or why not?

Has anyone you know tried to convince you to quit smoking?

Yes No

If "Yes," why?

QUESTIONNAIRE FOR THOSE WHO USED TO SMOKE

PLEASE CIRCLE ONE

How often did you smoke (time(s) per day)?

1-4 5-8 9-12 13-16 17-20 21-24 25+

How many packs of cigarettes did you consume per week?

Less than 1 1-3 4-6 7-9 10-12 13-15 16-18 19-21 22+

Do/did you have regulations against smoking at work?

Yes No

If "Yes," how did these regulations affect your smoking habits?

No change Slightly limits smoking Greatly limits smoking Has forced me to stop smoking

If "Yes," the regulations helped to make your decision to quit smoking.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

How often do you frequent establishments that do not allow smoking (i.e. bars, restaurants, etc.)?

Very Often Often Sometimes Rarely Never

On average, how many anti-smoking advertisements are you exposed to every week?

None 1-2 3-4 5-6 7-8 9-10 11+

How many of these advertisements are in print (i.e. newspaper, magazines, etc.)?

None 1-2 3-4 5-6 7-8 9-10 11+

How many of these advertisements are on television?

None 1-2 3-4 5-6 7-8 9-10 11+

How many of these advertisements are on the radio?

None 1-2 3-4 5-6 7-8 9-10 11+

Anti-smoking advertisements provide/provided me with information I wasn't previously aware of.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

Anti-smoking advertisements led me to believe that I should quit smoking.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

I was aware of the health risks associated with smoking cigarettes.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

I was concerned that my own health may be affected by smoking cigarettes.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

I was concerned that I may affect another individual's health by smoking cigarettes.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

Did anyone you know try to convince you to quit smoking?

Yes

No

What made your decision to quit smoking?

QUESTIONNAIRE FOR THOSE WHO DO NOT SMOKE

PLEASE CIRCLE ONE

Have you ever smoked a cigarette?

Yes

No

I have considered smoking in the past.

Strongly Disagree

Disagree

Slightly Disagree

Slightly Agree

Agree

Strongly Agree

What made you decide that you didn't want to smoke? (Circle all that apply)

Health Risks

Too expensive

Convinced by others not to

Didn't enjoy it

Other: _____

Do you have regulations against smoking at work?

Yes

No

How often do you frequent establishments that do not allow smoking (i.e. bars, restaurants, etc.)?

Very Often

Often

Sometimes

Rarely

Never

On average, how many anti-smoking advertisements are you exposed to every week?

None

1 – 2

3 – 4

5 – 6

7 – 8

9 – 10

11+

How many of these advertisements are in print (i.e. newspaper, magazines, etc.)?

None

1 – 2

3 – 4

5 – 6

7 – 8

9 – 10

11+

How many of these advertisements are on television?

None

1 – 2

3 – 4

5 – 6

7 – 8

9 – 10

11+

How many of these advertisements are on the radio?

None

1 – 2

3 – 4

5 – 6

7 – 8

9 – 10

11+

Anti-smoking advertisements provide me with information I wasn't previously aware of.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

Anti-smoking advertisements reassure me that I don't want to smoke cigarettes.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

I am aware of the health risks associated with smoking cigarettes.

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Agree

Have you ever tried to talk to a smoker you know about quitting smoking?

Yes No

Why or why not?

If "Yes," did this person quit smoking?

Yes No

Why or why not?

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