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The Effects of Anti-Depressant Advertising on Perception of Depression in College Students at
Marshall University

Thesis submitted to the Graduate College of Marshall University

In partial fulfillment of the requirements for the degree of
Master of Arts (Journalism and Mass Communications)

by

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Table of Contents

Abstract.....	iii
Chapter One: Introduction.....	1
Chapter Two: Review of Literature.....	5
Chapter Three: Methods.....	20
Chapter Four: Results.....	26
Chapter Five: Discussion.....	30
Chapter Six: Limitations and Recommendations.....	33
References.....	35
Figure 1.1: Anonymous Survey Consent Form.....	41
Figure 1.2: Informed Consent Form.....	42
Figure 1.3: Debriefing Form.....	43
Figure 2.1: Results Chart.....	44
Figure 3.1: Questionnaire.....	45
Figure 4.1: Commercial Storyboard.....	47

Abstract

The Effects of Anti-Depressant Advertising on Perception of Depression in College Students at

Marshall University

Deirdre Robertson

This exploratory study was designed to determine the effects, if any, of direct-to-consumer advertising of anti-depressants on Marshall University students' perceptions of depression and anti-depressant medication. For the purposes of the study, two versions of an advertisement were created: one including three false statements regarding depression and anti-depressants, and one without false statements. A fifteen-question survey was also created as a baseline to measure whether the advertisement condition had any direct effects on the participants' perceptions of depression and anti-depression and to provide comparison for the participants' reactions. All three groups took the survey. There were ninety participants in the study, split into three groups of thirty, including a group that viewed the commercial with false statements, a group that viewed the commercial without false statements, and a control group that did not view any advertisement.

Analysis of the results revealed that there was not a significant link between the information presented in the advertisement conditions and participants' perceptions of depression and anti-depressants. The participants' responses on the survey did not appear to be influenced by the false information in the advertisement. Results did not support the expectation that the advertising condition would significantly alter the perceptions of college students regarding depression and its treatment.

Chapter One: Introduction

More than 19 million American adults suffer from depressive disorders, according to the American Psychological Association (APA) in 2007. At any given time, depression generally affects 5% of the population (Goldney, Fisher, & Wilson, 2001). In fact, the disabilities associated with Major Depressive Disorder (MDD) are surpassed only by those associated with ischemic heart disease (Waraich, Goldner, Somers, & Hsu, 2004). When dealing with any such prevalent disease, it is imperative to recognize symptoms, seek diagnosis, and receive appropriate treatment. However, depression is not as easily recognizable as the flu or a cold, and the general population is not well informed about its symptoms. Mental health literacy, especially in terms of depression, is vital to controlling the prevalence of the disease (Waraich, Goldner, Somers, & Hsu, 2004).

The increased prescription of anti-depressants has not necessarily been successful in combating the elevating frequency of depression (de Jonghe, Hendriksen, van Aalst, Kool, Peen, Van, van den Eijnden, & Dekker, 2004). There has been no success in finding biological predictors in responses to anti-depressant treatment. What have been successful, however, are investigations into psychological predictors for response; these findings have established that the effectiveness of anti-depressant treatment can only be judged on a case-by-case basis and are better determined by physicians with a psychiatric background (de Jonghe, et. al., 2004). According to this study, the average physician is not qualified to create a psychiatric profile detailed enough to determine whether or not anti-depressant treatment will be effective in most patients; the increased prescription of anti-depressants based on direct-to-consumer advertising supports this conclusion.

To understand the modern public conception of depression, one must look at modern public information sources. Much of public knowledge comes from anti-depressant commercials, magazine advertisements, and the Internet, not from accredited medical sources (Goldney, Fisher, & Wilson, 2001). In 2000, the pharmaceutical industry spent 1.8 billion dollars on direct-to-consumer-advertising (DTCA) of prescription drugs, most of which was spent on television making it an important source of information for the general public (Polen, Khanfar, & Clauson, 2009).

Advertising, and particularly television advertising, has long been recognized as a source for individuals to learn and model behavior through social learning (Philips & Orton, 1983). Albert Bandura's theory of Social Learning claims that individuals learn accepted social behaviors and expectations through modeling or observing others and forming an idea of how certain behaviors are performed; individuals then use this coded information to determine similar actions in the future (Bandura, 1977). According to Bandura's theory, there are several levels of observational learning, the first of which is achieved by first ~~organizing~~ organizing and rehearsing the modeled behavior symbolically and then enacting it overtly (Bandura, 1986).” The theory also suggests that individuals are likely to adopt the modeled behavior if it demonstrates an outcome valued or desired by the individual, particularly if the model is similar to the observer and has admired status. For effective modeling, Bandura claims that the following conditions must be met: first, attention must be paid; taking in considerations of factors which increase or decrease attentions such as distinctiveness, affective valence, prevalence, complexity, and functional value. Secondly, the observer must retain the information presented, typically using symbolic coding, mental images, cognitive organization, symbolic rehearsal, and motor rehearsal. Thirdly, for successful modeling, the modeled behavior must be reproduced, including the use of physical

capabilities and self-observation. Finally, the observer must be motivated or presented with a good reason to imitate the modeled behavior. The use of traditional behaviorism promised or imagined incentives, and vicarious models that reinforce the original intent of the model (Bandura, 1986).

The use of Social Learning in advertising is pervasive. “The constant flow of advertising images of gender, types of persons, social classes, and other groups influence our social learning process” (Roy, 1998). According to the same article, advertising plays an important role in social reinforcement by using modeled behaviors to cultivate certain opinions, attitudes, and behaviors; advertising not only sells products and services by providing individuals with coded information, but indirectly suggests ways in which to understand the world (Roy, 1998).

A recent study found that print advertising is generally more informative than television advertising, and the researchers concluded that the DTC television advertisements were not doing a thorough job of meeting the FDA’s fair balance requirements, particularly when presenting information about the risks of the advertised prescription drug (Macias, Pashupati, & Lewis, 2007). The fair balance requirement for DTCA is flexible and prohibits only ads that convey a deceptive impression of the risk and benefits from the overall presentation of information, rather than those that fail to achieve a mechanistic balance between risk and benefit information because they do not present such information with identical emphasis" (FDA, 2007).

Fair balance requirements do not mandate that all side-effect information or potential risks must be included in the advertisement, but that they must be in balance with the benefits presented. These benefits and risks must also be comparable to those presented in advertisements for other prescription drugs. This allows the industry the means of self-regulating its use of risk

information in DTCA, which may or may not satisfy the original requirements laid down by the FDA (FTC, 2003).

It has been suggested that direct-to-consumer advertising has significantly increased frequency of prescriptions of anti-depressant drugs in recent years (Hersey, 2004). “The increasing visibility of direct-to-consumer antidepressant advertising coincides with growing numbers of antidepressant treatments” (Apfel, 2003). Several studies have noted how patients complaining of depressive symptoms are more likely to receive a diagnosis and subsequent medication by mentioning a specific advertisement to their doctors (Ackman & Glied, 2002). Healthcare consumers in recent years have taken a more active role in determining what they are prescribed, making their education regarding prescriptions drugs more important than is being addressed by DTCA (Macias, et.al, 2007). In fact, according to a study using a sixty-eight question survey regarding participant attitudes toward DTCA, a large portion of the group (58.6%) believed that DTCA encourages consumers to take a more active role in managing their prescriptions, while 27.6% felt that DTCA caused more confusion regarding the benefits and harms of prescription drugs on the market and believed that the costs of DTCA outweigh its benefits (Polen, et.al, 2009). The major purpose of this research is to explore what role, if any, DTCA plays in the public’s perception of depression and anti-depressants, as well as how DTCA affects the college-age population.

Chapter 2: Review of Literature

There are many examples of DTCA influence on consumers in their interactions with their physicians. A patient preparing for cataract surgery provided her nurse with a detailed list of believed symptoms and preferred medications she wished prescriptions for upon discharge, despite the fact that her physician was an ophthalmologist and was unqualified to prescribe medications for high cholesterol, osteoporosis, and acid reflux. This example demonstrates that DTCA may increase the likelihood of consumer self-diagnosis and complicate the balance between physicians and patients (Salladay, 2007). In another example, a physician, Frey (2003), describes a visit to his clinic by an eleven-year-old boy and his mother who demanded Lamisil, based on an advertisement the boy had seen on television that showed fingernails that looked like his own. When Frey prescribed a generic alternative considered to be just as effective, despite his belief that the prescription was ultimately unnecessary, both the mother and the boy left disappointed that their request for the brand-name medication had been denied (Frey, 2003). Such examples demonstrate the influence that DTCA can have on consumer perceptions and preferences for medications advertised most prevalently (Royne & Myers, 2008).

A study examining antidepressant advertisements analyzed the “messages” embedded in both imagery and words commonly used in advertisements. The researchers used semiotics and frame analysis to examine the advertisements by applying Manning’s (1987) five points of analysis. According to the article, Manning’s model suggests a comprehensive means of viewing semiotic methodology (Bell, Kravitz, & Wilkes, 2000). Manning argues that semiotics constitutes a model that is “rooted in culture and seeks to identify the rules or principles that guide signification, the process by which objects in the world communicate meaning” (Manning, 1987). The five points of analysis are used to analyze signs and what they symbolize and how

they relate to one another, second, how they are articulated, third, how they function socially, fourth, to what degree they are integrated, and finally, to determine what, if any, are the mythological components to their construction. The researchers were able to find that most anti-depressant advertisements are framed as a bio-chemical issue and are highly skewed toward women. Consumers are presented with a simplistic construction of a complicated medical condition that cannot be bound by gender or biological components but is frequently a response to —social and cultural circumstances,” which encourages consumers to follow the advice of advertisements rather than that of their own doctors (Bell, et.al, 2000).

One study found that the number of people diagnosed with depression and prescribed anti-depressants was significantly higher during periods when direct-to-consumer advertising (DTCA) spending was highest (cumulatively over 18.5 million). Patients diagnosed during this period were 32% more likely to begin medication (Donahue, Berndt, Rosenthal, Epstein, & Frank, 2004). In another study, a twenty-one item survey was sent to 604 prescribing clinicians asking details about their prescription rates and how they were affected by DTCA. Most of the respondents (87%) reported that DTCA prompted their patients to request inappropriate medications and more than one in five of the reporting clinicians stated they experienced difficulty persuading said patients to accept more appropriate prescriptions (Fortuna, Ross-Degnan, Finkelstein, Fang, Campion, & Simon, 2008).

It is necessary to determine the extent advertising influences current views on depression and current forms of medication and treatment if the communications and psychology communities are to address the growing concerns regarding the relationship between increased prescription of anti-depressants and prescription advertising (McKay, 2000). Medications like anti-depressants for conditions with unclear diagnoses may be responsible for more potential

harm to consumers than other types of advertised medications. Depression is a more complicated diagnosis with symptoms that aren't clear to someone who is not a trained professional; such advertising is more likely to encourage unwitting consumers to seek treatment for a condition from which they do not suffer (Royne & Myers, 2008).

Critics of DTCA claim that this form of advertising compromises the physician–patient relationship and confuses patients by presenting promotional messages as educational (Wolfe 2002). Proponents of this view also claim that DTCA increases consumer demand for brands and more expensive medications rather than providing appropriate information needed to make better health-care decisions (Mintzes 2002). Appel (2002) examined public perception of DTCA, particularly regarding the anti-depressant Prozac, and found that patients with depression may seek treatment because of Prozac advertisements. However, influence from the advertising has in some cases prompted patients to choose brand-name anti-depressants over equally effective generic drugs in the same classes that might be more appropriate. Experts also claim that the medications presented in DTCA often give the appearance of being new and improved“ over alternative treatments, while in many cases older and frequently less expensive drugs may actually be the best treatment.

An's study (2008) conducted in the Midwest, found there was an effect on the perceived prevalence of depression in subjects presented with anti-depressant DTCA. The study showed that those with a higher recall for the advertising were more likely to estimate the prevalence of depression as being higher than those who had lower recall. The study showed that when the subjects were reminded where their information was taken from, its veracity was doubted and the significant association was eliminated. The researchers concluded that while people are more likely to remember the information presented in anti-depressant DTCA and make use of the

information, they will in most cases doubt its validity when reminded of its source. However, in normal situations when the source is not highlighted, the subjects were more likely to adhere to information presented in the DTCA, which argues for more cautious and thorough advertising.

Several studies dealing with the increased rate of prescription due to the claim of increased direct-to-consumer advertising have found that most patients prescribed anti-depressants by their regular physicians do not seek outside psychological treatment. According to a recent study, evidence suggests that general practitioners often find making decisions and diagnoses for depression problematic, but appropriate prescriptions are also difficult. It is common practice to prescribe antidepressants for patients presenting symptoms of anxiety and depression when that is not always the most practical solution (Hyde, Calnan, Prior, Lewis, Kessler, & Sharp, 2005). A study investigating the success of drug therapy alone versus drug therapy combined with psychoanalytical therapy found that the combined treatment was far more successful than drug therapy alone, and in fact psychotherapy alone was extremely effective (Pampallona, Bollini, Tibaldi, Kupelnick, & Munizza, 2004).

Anti-depressant advertisements, like most commercial advertisements, are designed to appeal to certain demographics and to play up the benefits of the product, while downplaying negative aspects. According to Goldman and Montagne (1986), these kinds of advertising techniques disrupt scientific discourse, certain types of social knowledge, and even discourage professional debate regarding non-medicated treatment approaches to mental illnesses. Hersey's (2004) exploratory study investigating how the portrayal of depression in pharmaceutical advertisements has changed through the years since 1980 used content analytic and qualitative methods to analyze advertisements. The researchers found that increased use of female models dominated the advertisements through this time period, and that the advertisements portrayed an

increased number of “recovered” patients. Commercials using these tactics were less likely to focus on negative information, both in defining social interactions in the individuals portrayed, and in the information given regarding treatment (Hersey, 2004).

A recent study (Frosch, Krueger, Hornik, Cronholm, & Bart, 2007) examined the makeup of DTCA for prescription medications, including anti-depressant advertisements. A sample of 103 ads was coded for regularities such as symptoms, mechanism of the disease, causes or prevalence of a condition, and subpopulations at risk. Then the ads were coded for how they would appeal to consumers, including rational, positive emotional, negative emotional, humor, fantasy, sex, and nostalgia appeals in their sample. Finally, the authors examined how the actors portrayed the role of the medication advertised in their characters’ lives. The authors noted that while all of the advertisements included factual information about risks and side effects to meet regulatory requirements, most of the ads limited the information to symptoms and the biological nature of the disease or condition instead of focusing on the risks associated with the medication. According to the article, only one-fourth of the sample examined presented a complete list of risk factors for the specific medical condition and an even smaller eight percent of the ads included specific information about the populations at risk for the conditions (Frosch, et.al, 2007).

The study also found that almost all the ads examined included positive emotional claims regarding the use of the medication, and the majority of the negative emotional appeals made typically showed the actor in a negative state prior to the use of the advertised medication, followed by a positive appearance after the use of the medication, creating a sympathetic and motivating presentation for consumers. More than half of the same advertisements included information that claimed or implied that the characters in the advertisement regained control of lost functions, abilities, and emotional connections after use of the medication, which creates an

equally compelling appeal for consumers exposed to DTCA for medication, especially anti-depressants (Frosch, et.al, 2007).

While supporters of DTCA for medication may claim that there is little harm done to the consumer by the advertising, due to the increased link between suicide and anti-depressants, particularly in minors, many anti-depressant commercials, such as the popular Zoloft advertisements, have been removed from broadcast (Rockoff & Wang, 2008), and company websites have been forced to include efficacy statistics, as well as information about clinical trials (Graber & Weckman, 2003), suggesting that the FDA does not agree. In February of 2004, House Representative Henry A. Waxman criticized the FDA for allowing DTCA for prescription medication to be misleading, giving consumers a skewed view of the medications' benefits and risks. The FDA responded by releasing new guidelines for DTCA, but many critics are still unsatisfied, claiming that the guidelines do not have enough application for television advertisements and mainly focus on print and product labeling information, and that the material is too complicated and loaded with technical jargon to be decipherable to anyone but a physician (Young, 2004).

There are also examples of DTCA for prescription drugs being not only misleading but false, including television commercials. For instance, Pfizer ran a series of commercials in 2007 advertising the cholesterol medication Lipitor with spokesman Dr. Robert Jarvik, who was touted as the inventor of the artificial heart and was portrayed as an accomplished rower. Investigations into claims made by the medical community revealed that not only was a body double used in the rowing scenes that made up much of the commercial, but Robert Jarvik was not the sole creator of the artificial heart and was in fact not a licensed physician at the time (Wedekind, 2008). The president of Pfizer was compelled to admit that the misleading way in which Robert

Jarvik was represented in the advertisements led to ~~mis~~misimpressions and distractions,” ultimately harming consumer perceptions regarding cardiovascular disease and its treatments. In January of 2008, The House Committee on Energy and Commerce's Subcommittee on Oversight and Investigations started an investigation into "false and misleading statements and the use of celebrity endorsements of prescription medications in direct-to-consumer advertising,” which found that Pfizer was not the only company responsible for misleading advertisements, despite recent regulations released by the FDA. The committee acknowledged that some of the most popular DTCA for prescription medications practiced deceptive tactics (Dingell, 2008).

A number of recent advertisements have not been for any specific anti-depressant drugs, but have been generalized advertisements about depression from drug companies directing viewers to websites with more information on treatment. Graber and Weckman (2003) examined the websites of anti-depressants and their companies for a varied and thorough presentation of both the benefits and the risks of anti-depressant treatment found that out of nine websites, three contained anecdotal information designed to make the practice of drug treatment seem more common to the potential customer. Only four of the websites mentioned other drug therapy as treatment, and only one mentioned the trade names of other drugs. None of the websites mentioned drug costs; only one had efficacy statistics for the drug. While all of the websites mentioned at least one adverse effect, only one site had percentage rates for adverse effects, and none of the sites listed all adverse effects found in clinical trials. Graber and Weckman concluded that information about anti-depressants found on their own company websites is faulty, incomplete, and makes it difficult for consumers to compare drugs and other methods of treatment.

There are few studies that deal directly with the attitudes of the population toward depression. The incorporation of this measure should be essential in determining the prevalence and seriousness of depressive disorders in the U.S.; the general lack of knowledge regarding depression and its treatments adds to the dilemma (Goldney et al., 2001). Studies in this field are limited. Most deal with the diagnosis and treatment of depression, not the general perception of the disorder. One study measured mental health literacy, and found that only thirty-nine percent of a community sample correctly labeled depression (Goldney et al., 2001). Though this study did not examine the effect of advertisements on public opinion, it does give broad measure of perception, and provides a basic idea of how poorly informed people are on the subject.

Supporters of pharmaceutical advertising argue that the advertisements are not meant to mislead consumers, but to inform regarding disorders and the prescription drugs used to treat them. Pharmaceutical companies claim that DTCA is meant to encourage consumers to talk to their doctors about the drugs and is not meant to influence purchasing behavior (Holmer, 1999). Supporters argue that DTCA can actually improve public health and knowledge about diseases that are frequently misunderstood or misdiagnosed, and will encourage consumers to seek out other sources of information, whether from friends, family, doctors, or even other popular media (Royne & Myers, 2008). According to a review of current literature regarding DTCA, it was suggested that proponents of DTCA claim that the increased availability of complex and sometimes inaccessible information is a significant benefit for the general public, giving them the opportunity to make informed decisions about their health care. Supporters also claim that advertising of medications encourages consumers to take a more active role in personal health and provides necessary information to help them seek medical attention for conditions that might otherwise go unidentified and untreated (Royne & Myers, 2008). It is also acknowledged that

DTCA is not the only source of information on popular medications; while DTCA sometimes provides a catalyst for consumers to seek information about a particular medication, many consumers have existing knowledge regarding popular medications based on information from family members, friends, or earlier discussions with physicians. DTCA supporters conclude that while DTCA is an important informative tool for the general public, it is by no means the only source of information (Royne & Myers, 2008).

Huh and Becker (2005) found that especially “older and less educated consumers benefit from prescription drug advertising since they are more likely to be ready to communicate with their doctors.” The research also suggested that women who view DTC prescription advertising are more likely to seek out information independently and be able to communicate more effectively with their doctors (Huh & Becker, 2005).

A study conducted by Limbu and Torres (2009) examined the difference in effectiveness of DTC prescription advertising with consumers who were considered either low or high involvement. Those with low involvement were considered to have less interest and concern in an object or product before exposure to advertising, while those with high involvement displayed higher levels of interest and concern in an object or product before exposure. The researchers argued that consumers with high involvement were more likely to approach their doctors about the prescription drug advertised than those with low involvement. Based on their findings, Limbu and Torres suggested that persuasive DTCA is more likely to encourage high involvement consumers to communicate with doctors about an advertised drug; the researchers concluded that the advertising would mainly appeal to those who would already be susceptible to persuasive advertising (Limbu & Torres, 2009).

Herzenstein, Misra, and Posavac (2005) claimed that consumers' attitudes regarding DTC prescription advertising were neither favorable nor unfavorable, but that attitudes were related to whether consumers independently sought out further information about the drug, asked their doctors about the drug, or were likely to seek out relevant information from a friend or local pharmacist. Consumers who rely on interpersonal aid and mass media in discovering health information tend to have more positive attitudes regarding DTCA (Lee, Salmon, & Paek, 2007). Oncology Nurse Practitioners (ONPs) were surveyed regarding their opinions on DTC prescription advertising. While they were found to have mixed opinions regarding the practice, most did not believe that they were heavily influenced by relevant advertising with regard to patients' prescriptions. The surveyed ONPs also suggested that patients who asked about specific medications based on DTCA were generally interested in the veracity of the information presented and it did not seem to have a significant effect on their requests for specific medication (Viale & Yamamoto, 2004).

Depressive disorders are most common in adults, and one of the major populations of that community is college students. As part of the population getting their general information on depression from commercials and magazine articles, according to the APA, the number of unreported cases of depression is growing. Abernathy and Adams-Price (2006) compared older versus younger adults' ability to remember and comprehend drug information. They found that younger adults had a greater increase in their knowledge of the drugs presented in the advertising condition. For college students dealing with the extra stressors of college life, depression is a common problem and they are likely to seek out treatment; however, many may be biased in their attitudes toward the disease, as well as its treatment due to the increase in DTCA of anti-depressants (Pilcher, 1998).

The college age population is essentially important as it is a milestone growth into adulthood from adolescence (Persi, 1997). For students faced with high stress, social behavior expectancies, and absence from family, depression can be triggered by an already existing tendency to the disorder (Pilcher, 1998). During college years, many young adults are introduced to new developmental tasks and responsibilities, which are often linked to mental distress (Apfel, 2003). One particular case study noted the difficulty experienced by teenagers suffering from emotional disorders in making the transition to adulthood (Gilbody & Davis, 1999). A study conducted through the 2007 Annenberg National Health Communication survey investigated the impact of exposure to DTCA for prescription anti-depressants and anti-anxiety medications on public perception and opinion regarding treatment for youth experiencing depression or anxiety. The survey was distributed to a sample group of adults who were exposed to current DTCA for anti-depressants and found that those among the group who did not have previously negative attitudes towards DTCA were more likely to prefer the medications advertised in the treatment of youths with depression or anxiety, while those who had previously expressed negative perceptions of DTCA were less likely to respond positively to the medications advertised (Martinez & Lewis, 2009). Because of the delicate nature of mental illnesses such as depression, it is imperative to be able to accurately identify depression and seek appropriate treatment, which may or may not include a popularly advertised medication, for which a general practitioner may or may not be sufficient (Gilbody & Davis, 1999).

The influence of advertising on college students is as prevalent as with the general adult public. Depression has been an issue of growing concern for college students (Apfel, 2003). A longitudinal study at a university counseling center found that the number of students seeking help for depression doubled from 1988 to 2001 (Benton, Robertson, Tseng, Newton, & Benton,

2003). In addition, anti-depressants have become the most popular form of treatment prescribed despite availability of many other alternatives (Jureidini & Tonkin, 2006).

Students are more likely to confuse transitional and typical distress associated with age, stress, and isolation with depression; the common phrase found in drug advertisements —“ask your doctor if this [medication name] is right for you,” encourages students to seek out drug therapy rather than attempt less aggressive methods (Kadison, 2005). Family and friends exposed to these advertisements may also add to the impression of students experiencing depression by suggesting that “symptoms” exhibited by students are indicators of a mental disorder (Kadison, 2005). Some students are also developing the view that antidepressant medication will maximize school performance, neutralize anxiety, or provide a mood boost. While it is possible that increased visibility and awareness of depression may reduce the public stigma attached to common mental disorders, it also suggests that the advertisements are a “magic bullet” for young adults’ complex and varied problems (Kadison, 2005).

In fact, a study conducted at the University of Wyoming examined college students’ perceptions of depression when given the typical explanation found in prevalent advertising that depression is a chemical imbalance versus a more accurate biopsychosocial explanation. The study found that students who accepted the chemical imbalance explanation were more likely to view drug treatment more favorably than psychotherapy, while students who accepted the biopsychosocial explanation were more inclined toward therapy and less favorable about drugs. The findings suggest that commercials that use the chemical imbalance explanation are more likely to influence consumers and college students in particular to view prescription drug treatments as more effective than therapy, which is harmful to the overall view of depression and its treatment (Deacon & Baird, 2009).

In order to better understand college students' perception and use of widely advertised prescription medications, one study surveyed over four-hundred students from three separate institutions regarding their use of advertised medications, how much attention they paid to advertisements, their level of communication with physicians regarding the medications, and their perceptions of the conditions treated by the advertised medications (Burak & Damico, 2000). The researchers found that the majority of the students surveyed used at least one of the advertised products they were questioned about and most students did not discuss alternative pharmaceutical products with their doctors, nor did they discuss the conditions with their doctors. As Burak and Damico claim, since young people, including college students, are more likely to take more than the recommended dosage or take medication for purposes other than intended, or even in combination with other drugs, there is concern that advertising, especially if it is faulty or misleading might encourage students to seek out unnecessary medication or use their prescriptions to adverse reactions. According to the article, young adults are more likely to self-medicate and are generally less open with their physicians, making them particularly susceptible to prevalent advertising that describes their perceived symptoms and treatment in one commercial (Burak & Damico, 2000).

A study conducted to determine the effectiveness of anti-depressant advertising on undergraduates in a university separated participants into two groups: a scientific study condition and an advertisement condition. Based on the Beck Depression Inventory used by the researchers, 40% of the female participants in the advertisement condition believed they were experiencing depression after being exposed to the advertisement, as opposed to 6% in the scientific study condition. The results suggest that female participants in the advertisement condition were more likely to believe that they had depression, that depression required

treatment with anti-depressants, and were likely to suggest anti-depressant treatment to family and friends (Frankenberger, Frankenberger, Peden, Hunt, Raschick, Steller, & Peterson, 2004).

As with any disease, those suffering from depression need to be aware of symptoms and treatment options. Recently, the increase in medication advertisement, as well as patient demand, has begun to influence doctors' decisions (Schwenk, 2005). For a single episode of depression, an average physician will prescribe anti-depressants for up to nine months without requiring a psychological workup (Demytteneare, Bruffarets, Albert, Mesters, Dewe, Debruyckere, & Sangeleer, 2004). Since the 1980s it has become routine to prescribe such drugs as a management of depression; however, the negative effects are beginning to show in long-term users (Nierenberg, 1999). It is crucial to correctly identify and treat depression, not only to ensure attention from those actually suffering from a major depressive disorder, but also to prevent any negative side effects or even suicide in those being treated unnecessarily.

There is a need to expand upon these studies in the realm of college students' perception of depression (Frankenberger, et. al., 2004). It is not pertinent to this study to screen for depression or discuss in depth the symptoms, but only to ascertain the general perceptions of the disease. The influence of advertisements and incorrect information is also of interest; it is important to see if such methods of communication are harmful to the general population's perception of depressive disorders.

The following study was designed to determine how much of an effect, if any, advertisements have on college students' perceptions of depression and anti-depressants. As there is very little research on this subject pertaining to college students and young adults (Royne & Myers, 2008), the researcher intends to investigate how DTCA affects beliefs and perceptions on the effects of anti-depressants, the risks associated with them, and overall knowledge about

depression after exposure to a manufactured broadcast advertisement. The researcher is interested in determining whether the questionable material being presented in television DTCA is not only influencing treatment preferences, but is also adding to the already confused perceptions of depression, or if it is simply adding to the collective knowledge regarding depression and its treatment.

For the purposes of this study, the following questions will be researched:

RQ1: Will sampled Marshall University students learn claims from an example of DTC medication advertising?

RQ2: Will the advertisement have an effect on their perceptions of depression and its treatment?

RQ3: Will misleading information buried in an advertisement influence students' responses regarding informational questions about depression and treatment?

RQ4: Based on Bandura's Social Learning Theory which states that individuals learn behavior from models presented in a stimulating and accessible manner (Bandura, 1997), will students learn faulty information from a constructed advertisement?

The researcher anticipates the effects of incorrect or misleading information presented in commercial form will significantly alter participants' perceptions of depression and anti-depressants, and will create a link between DTCA and specific ideas about medication.

Chapter Three: Methods

The researcher conducted an exploratory study on the effects on Marshall University students' perceptions of depression and treatment by creating two advertisement conditions and maintaining a control group in a single exposure experiment.

Respondents

In order to provide a pool of participants of the correct age and interests, the participants were drawn from both graduate and undergraduate Marshall University classes as a cross-section of the university's population. The researcher sent requests to several professors in different departments at Marshall University for the use of time during classes to conduct the study, and with permission from cooperating instructors, the researcher was able to draw a convenience sample of 90 participants, with 30 participants in each of the three test groups. There was no incentive for participation; participants were recruited on a voluntary basis. Students in psychology classes and psychology majors were excluded from the study in order to eliminate possible bias; the researcher believed due to the psychology curriculum there was a possibility for prior knowledge of depression and treatments that would alter participants' responses and therefore render the results invalid. The participants were treated in accordance with the American Psychological Association ethical guidelines, as well as Marshall University's Institutional Review Board's requirements.

Apparatus

The researcher determined which anti-depressants were among the top-searched medications on the Internet (Newell, 2008), the researcher viewed advertisements for each of the medications including Effexor, Cymbalta, Lexapro, and Paxil, to analyze the common components used in the DTCA. After visiting the websites for the medications, it was clear that

the television commercials would be most representative of DTC prescription advertising, due to the length of the ad and the visual aspect of video and music, which was not found on each website. Each commercial was recorded from television and viewed four times. The researcher determined a pattern to certain elements that could be reproduced for the purposes of the study: first, the portrayal of actors in depressed or negative poses, usually with slow music and dim lighting in the background; second, a basic description of depressive symptoms including the loss of interest in activities, anxiety, suicidal thoughts, etc.; third, the commercials claimed that depression is caused by a chemical imbalance; finally, the commercials gave a brief description of the risks associated with the medication, and then showed the actors in a more positive setting, recovering lost abilities or relationships, and played upbeat music with brighter lighting in the background, in many cases, placing the actors in a bright outdoor setting.

Based on these common components, the researcher created two versions of a commercial encouraging the general use of anti-depressants. The commercial followed the basic format of the researched anti-depressant advertisements; since the advertisements reviewed were between 30 seconds and 120 seconds, the manufactured commercial was one-minute long and featured several different actors of both genders ranging from college-age to middle-age. The commercial opened with basic information about depression similar to that in the reviewed commercials and then shifted into information about anti-depressants and how they improve depressive symptoms (see Figure 4.1). In the first half, the actors were shown experiencing a loss of enjoyment of activities such as playing with a dog, frustration at work, marital difficulties, and apathy; in congruence with the reviewed advertisements, the music was slow and the lighting was dim. During this portion, the information about depression was revealed, including the common assertion that depression is caused by a chemical imbalance. The advertisement then

transitioned into the positive segment, portraying the actors enjoying activities again, smiling and displaying happiness in relationships; the lighting was also brighter and most of the scenes were shown out of doors with more upbeat music playing in the background, as was described in the study that examined the negative and positive emotional appeals in DTC medication advertising (Frosch, et.al, 2007).

Due to the arguable presence of misleading or false information in prevalent medication advertising, such as the previously described example of Lipitor, and the concerns raised by the government about misleading prescription DTCA and the FDA's slow response to addressing inconsistencies and misleading information in DTC television advertisements (Young, 2004), the researcher chose to create a version of the commercial with three inaccurate or misleading statements regarding anti-depressants, their use, and possible side effects. The incorrect statements were based on information in an article that investigated common misconceptions and perceptions of depression and antidepressants. The article suggests that participants frequently believed falsely that: 1. Anti-Depressants will not cause withdrawal symptoms when ceased suddenly; 2. Depression causes suicide; 3. Depression can be diagnosed in one doctor's visit, and treatment can be decided in the same visit (Hegerl, Althaus, & Stefanek, 2003). All of the information used to construct the commercial as well as the survey was taken from articles on the American Psychological Association (APA) website. The version of the commercial without misleading statements was created in the same format, but omitted the incorrect or misleading information. The commercials were presented to participants in two advertising conditions during classes, with the permission of the instructors. Due to class sizes, which did not exceed 50 students in any case, the researcher was able to show the participants in each class either the misleading commercial or the correct commercial using a DVD player on a laptop computer and

a projector, depending on the equipment available at the testing locations, which were in Marshall University classrooms. In classrooms that did not have a projector available, the students were asked to watch the DVD on the screen of the laptop.

The researcher developed a 15-question survey to measure the participants' perceptions of depression and anti-depressants, to be taken following the viewing of the commercial. The survey opened with brief demographic information to obtain the participants' age, major area of study, and gender; the researcher used the information only to ensure that no surveys taken by psychology majors were used. The questions were developed from statements frequently made in the reviewed anti-depressant commercials, the manufactured commercial, and information from the APA website. The survey was set up as a true/false condition; participants were presented with a statement that they could either qualify as true or false based on their own perceptions. Questions four (Anti-depressants will not cause withdrawal symptoms when ceased abruptly), twelve (Depression causes suicide), and fifteen (Depression can be diagnosed in one doctor's visit, and treatment can be decided in the same visit), corresponded directly to the false statements in the commercial and were designed to be a direct measure for the accuracy of participants' knowledge about depression and anti-depressants. Other questions were taken from the correct information in the commercial, and the remaining questions were taken from current scientific information, as found on the APA website. Each question was formulated to reasonably simulate information that might be found in actual DTCA without being a direct quotation in order to ensure that the participants were only responding to the researcher's manufactured commercial.

Procedure

There were three test groups in the experiment: Group 1, an experimental group that viewed the commercial with the false statements and then completed the survey directly after a single exposure to the advertisement; experimental Group 2 viewed the version of the commercial without the false statements and then completed the survey directly after a single exposure to the advertisement; the control group (Group 3) completed the survey without viewing either commercial.

	Commercial w/out misleading information viewed	Commercial with misleading information viewed	Survey Taken
Group 1 (Experimental)		X	X
Group 2 (Experimental)	X		X
Group 3 (Control)			X

The participating classes were randomly assigned to one of the experimental groups or the control group ahead of time.

Respondents were not informed beforehand that the commercial did or did not contain misleading statements. Respondents viewed the commercial as it played on the projected screen or the laptop screen. When the commercial ended, the lights were brought back up and the respondents completed the survey following instructions to answer the questions honestly and in accordance with their beliefs about the material presented. When the groups completed the surveys, the researcher passed out the debriefing form (see figure 1.3), and thanked them and the instructor for their time. Respondents in the test group were informed during debriefing that

there had been false statements in the advertisement and were told what the false statements were. The same procedure was followed with respondents in experimental Group 2.

The control group (Group 3) also signed consent forms and completed the questionnaire. The group was debriefed, but was not exposed to any advertising. The control group helped to ensure that differences in the responses of the experimental groups could be attributed to information presented in the advertising condition, and did not come from prior or outside knowledge.

Following the completion of the experiment, all participants were debriefed according to APA and Marshall University IRB standards.

Chapter Four: Results

The results are as follows:

Question 1: Depression is a mental disorder.

SUMMARY			F-ratio	0.946092
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.152116		
Group 2	30	0.21164		
Group 1	30	0.126984		

Question 2: Depression has genetic traits.

SUMMARY			F-ratio	1.216738
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.22619		
Group 2	30	0.152116		
Group 1	30	0.238095		

Question 3: Women are more likely to suffer from a depressive disorder.

SUMMARY			F-ratio	0.065116
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.189655		
Group 2	30	0.169951		
Group 1	30	0.169951		

Question 4: Antidepressants will not cause withdrawal symptoms when ceased.

(Test Question)

SUMMARY			F-ratio	1.385417
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.096059		
Group 2	30	0.169951		
Group 1	30	0.206897		

Question 5: Someone suffering from Depression is likely to be irritable and aggressive.

SUMMARY			F-ratio	0.070707
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.169951		
Group 2	30	0.147783		
Group 1	30	0.169951		

Question 6: Depression is a disease.

SUMMARY			F-ratio	0.179487
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.258621		
Group 2	30	0.251232		
Group 1	30	0.258621		

Question 7: Depression is caused by a chemical imbalance in the brain.

SUMMARY			F-ratio	0.150538
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.066502		
Group 2	30	0.066502		
Group 1	30	0.096059		

Question 8: Antidepressants are non-habit forming.

SUMMARY			F-ratio	9.303226
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.034483		
Group 2	30	0.251232		
Group 1	30	0.096059		

Question 9: Depression can be a chronic problem.

SUMMARY			F-ratio	0.835821
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.034483		
Group 2	30	0.096059		
Group 1	30	0.034483		

Question 10: Depression can have physical symptoms, such as headaches, digestive disorders, and chronic pain.

SUMMARY			F-ratio	0.525
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.034483		
Group 2	30	0.066502		
Group 1	30	0.096059		

Question 11: People suffering from Depression tend to suffer from a sleeping disorder, such as hypersomnia or insomnia.

SUMMARY			F-ratio	0.133333
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.096059		
Group 2	30	0.096059		
Group 1	30	0.066502		

Question 12: Depression causes suicide.
(Test Question)

SUMMARY			F-ratio	3.635659
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.206897		
Group 2	30	0.169951		
Group 1	30	0.258621		

Question 13: Antidepressants can have physical side-effects.

SUMMARY			F-ratio	1.484848
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.096059		
Group 2	30	0		
Group 1	30	0.066502		

Question 14: Depression is a common problem; most people will experience or come in contact with depression at some point during their lives.

SUMMARY			F-ratio	0.0875
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.147783		
Group 2	30	0.123153		
Group 1	30	0.123153		

Question 15: Depression can be diagnosed in one doctor's visit, and treatment can be decided in the same visit.

(Test Question)

SUMMARY			F-ratio	0.755187
<i>Groups</i>	<i>Count</i>	<i>Variance</i>		
Group 3	30	0.189655		
Group 2	30	0.23399		
Group 1	30	0.169951		

Based on a 0.05 level of significance, the advertising condition did not have a significant effect overall. The results of an Analysis of Variance (ANOVA) performed on correct responses to question twelve, the second of the false information questions, showed a significant link between the performance of the false advertising condition and the control group with a significance level of 0.03. The responses to the other questions taken from the false statements in the advertisement did not demonstrate a significant link.

There were four other questions that directly corresponded to truthful information in the commercial; question three, question seven, question eight, and question fourteen. There was no significant difference between the test group responses in any of the questions except for question eight (Antidepressants are non-habit forming). The responses in both advertising conditions differed significantly from the survey condition with a level of 0.0002. The responses, however, were the opposite of the information presented in the commercial, displaying a perception that antidepressants are habit-forming, which, according to the FDA (2007), is not correct. There does not appear to be any concrete explanation for the results. Overall, the results did not reflect the researcher's anticipation that the advertising condition would have a significant effect on participants' responses. The two instances of significant difference are likely not related to the advertising condition, but are due to extraneous factors.

Chapter Five: Discussion

The results of the current study do not demonstrate a significant link between the advertisement conditions and surveyed Marshall University students' perceptions of depression and anti-depressants. Accuracy for questions four and fifteen were not significantly lower for Group 1 than for the control group, which suggests that the advertisement did not affect the participants' responses. For question twelve (depression causes suicide), accuracy did differ significantly with a 0.03 level of significance; however, because this was the only question in which there was a significant difference among the three test groups, it may be inferred that there were other variables contributing to the results, and the responses were not solely based on the information presented in the advertisement condition.

Overall, the results did not support the expectation that the advertising condition would significantly alter the perceptions of participants regarding depression and its treatment. The sampled Marshall University students were not influenced by the example provided of DTC medication advertising, and it did not appear to have any significant effect on their perceptions of depression and its treatment. The misleading information was correctly identified as false by the respondents, which suggests that the respondents did not base their perceptions solely on the advertisement, but were influenced by outside sources or prior knowledge. In this case, the participants did not model behavior based on the advertisement, which also supports the possibility that they had outside information on the subject presented.

As displayed in Figure 2.1., the results for question twelve (Depression causes suicide) show that it is possible for anti-depressant advertisements with incorrect information to influence participants' perceptions of depression and anti-depressants, or that there is a general perception

that depression causes suicide. It is also possible that the wording of the question or information in the commercial was misinterpreted by the respondents since none of the other misleading statements appeared to influence responses significantly. The correct responses to the questions corresponding to the other incorrect statements suggests that while some respondents may be influenced to some degree by advertisements, they are also being influenced by information from other undetermined sources. This conclusion is supported by the results for question eight (Antidepressants are non-habit forming), which directly corresponded to correct information in the advertisement; however the participants in the advertising conditions overwhelmingly disagreed with the information. While the researcher can offer no definite explanation for the results, it may be inferred that the participants had outside information or prior knowledge that encouraged them to contradict the factual statement in the commercial.

The results of this study neither support nor contradict existing research that suggests advertising, particularly DTCA, can have a significant effect on viewers, and that advertisers should exercise caution in their selection of information for inclusion or exclusion in their advertising (Graber & Weckman, 2003). A recent study argues that both “proponents and opponents” of DTCA of prescription drugs assume that the ads increase prescriptions and awareness of diseases and treatments (Holmes, 2008). A study conducted by Michael Law of Harvard Medical School in Boston showed DTCA from the U.S. to viewers in Canada, where DTCA is prohibited. The study found that only one of three medications advertised saw an increase in prescription rate, and the effects only lasted for a few months. These findings suggest there may be a relationship between DTCA and perceptions of depression, but there are other sources of information that may contribute to the public’s attitude.

The researcher had anticipated that the misleading information in the advertisement presented to Group 1 would significantly alter participants' perceptions of depression and antidepressants, and would demonstrate a relationship between DTCA and specific ideas about medication. The results of this study did not support the expected outcome, but several unexplained results, including the significant link between the advertising condition and participants' responses to question twelve (Depression causes suicide) and the participants' disagreement with correct information in question eight (Antidepressants are non-habit forming) suggest that further research might generate different results.

Chapter Six: Limitations and Recommendations

As there is very little existing literature dealing specifically with the views and perceptions of college students and young adults regarding depression and anti-depressants and how they are affected by direct-to-consumer advertising (Royne & Myers, 2007), this study could be replicated in other university situations, as well as in adult groups. If the study were to be investigated further, different media with the false information could be used, including a manufactured print ad and several different advertisements. This study used a single exposure in the advertising conditions; a future replication would benefit from having multiple exposures over a period of time for greater likelihood of retention. A larger sample would be more effective, such as from several different universities in the region, or at least a wider selection of students from the university chosen.

Also, the use of focus groups could be a more effective means of measuring the influence of advertisements; having the participants in a more controlled environment with multiple exposures to varying types of advertising conditions could also affect the results differently. The testing sites for this study were Marshall University classrooms with large groups of participants; a more intimate setting with groups of no more than fifteen might be more effective and provide fewer distractions for participants. Also, in future research, the survey should include questions about where participants believe they obtain most of their existing knowledge about depression in order to determine what outside sources might be affecting their responses in the advertising conditions.

As a preliminary review before conducting the experiment, a future investigation might wish to survey the sample group regarding general information readily available about the subject matter before constructing the manufactured advertisement and survey in order to prevent

cross-contamination from outside sources. A future investigation into the acceptance of both correct and incorrect information in advertising may also provide insight into how the information is processed and perceived by the general public.

When researching popular commercials for patterns in DTCA, a future investigation should employ a panel of at least three members in determining the common elements. For the purposes of this study, the researcher was the only individual identifying patterns, and a future study would benefit from multiple viewers in order to identify the optimum patterns and elements; it is a limitation of this study that the researcher was the sole determinant.

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Figure 1.1

Anonymous Survey Consent

You are invited to participate in a research project entitled *The Effects of Anti-Depressant Advertising on the Perception of Depression in College Students* designed to analyze the effects, if any, of anti-depressant advertising on college students' perceptions of depression and its treatment. The study is being conducted by Dr. Chris Swindell –Primary Investigator and Deirdre Robertson – Co-Investigator from Marshall University. This research is being conducted as part of the thesis requirements for Deirdre Robertson.

This survey is comprised of 15 questions regarding depression and anti-depressants, and 3 questions about participants' overall knowledge of depression. The survey will take 5-10 minutes to complete. Your replies will be anonymous, so do not put your name anywhere on the form. There are no known risks involved with this study. Participation is completely voluntary and there will be no penalty or loss of benefits if you choose to not participate in this research study or withdraw. If you choose not to participate you may either return the blank survey or you may discard it. You may choose to not answer any question by simply leaving it blank. Returning the survey to the researcher indicates your consent for use of the answers you supply. If you have any questions about the study you may contact Dr. Chris Swindell in the Communications Building of Marshall University or Deirdre Robertson at (304) 733-4003.

If you have any questions concerning your rights as a research participant you may contact the Marshall University Office of Research Integrity at (304) 696-4303.

By completing this survey and returning it you are also confirming that you are 18 years of age or older.

Please keep this page for your records.

Figure 1.2

Informed Consent Form

I agree to participate in the observational research conducted by Deirdre Robertson. I understand that the proposed research has been reviewed by the Marshall University Institutional Review Board and that to the best of their ability they have determined that the observations involve no invasion of my rights of privacy, nor do they incorporate any procedure or requirements which may be found morally or ethically objectionable. If, however, at any time I wish to terminate my participation in this study I have the right to do so without penalty.

If not 18 years of age, please do not participate in this study.

If you have any questions about this study, you should feel free to ask them now or anytime throughout the study by contacting Deirdre Robertson

You may report any objections to the study, either orally or in writing, to any of the following people:

Dr. Chris Swindell	Deirdre E. Robertson
Supervisor	Primary Investigator
Department of Journalism and	414 Garden Lane
Mass Communication	Huntington, WV 25705
Communications Building	(304) 733-4003

Purpose of the Study: The researcher intends to measure the perceptions of Marshall University students regarding depression and its treatment, and explore any link between said perceptions and popular advertisements.

I understand that to maintain anonymity in analysis and reporting, no participant's name will be saved. All experimental data will be separated from the signed consent form to preserve confidentiality. Only members of the research group will have access to the data from this experiment.

I understand that in signing this consent form, I give Deirdre Robertson and associates on this project permission to present this work, both in written and oral form, without further permission from me.

Name: _____ Signature: _____

Date: ____/____/____

Figure 1.3

Debriefing Form

This form is to inform participants about the true purpose of the study. To avoid bias, the researcher withheld this information initially. The commercial which was presented was created by the researcher in order to determine how strong an effect advertisements have on college students' perceptions of depression. The researcher included several incorrect statements in the commercial in order to determine whether incorrect information could influence said perceptions. The incorrect statements were as follows:

- Anti-depressant medications will not cause withdrawal symptoms when ceased suddenly.
- Depression causes suicide.
- Depression can be diagnosed in one doctor's visit, and treatment can be decided in the same visit.

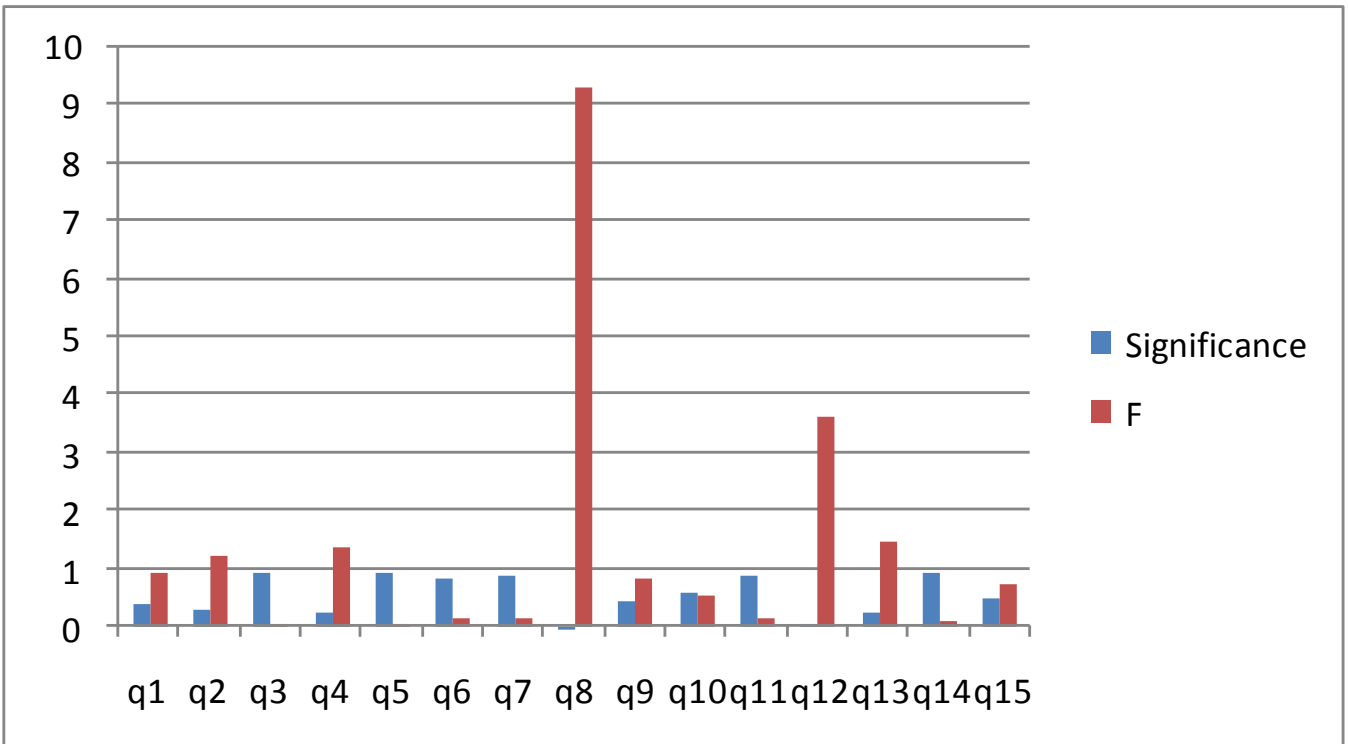
The study is being conducted in order to determine whether there is a link between advertisements for anti-depressants (through television) and incorrect perceptions of depression and treatment. The researcher is also analyzing actual anti-depressant advertisements to determine whether or not incorrect information is being included.

If you have any further questions, would like to know the results of the study when it is completed, or would like your data to be excluded from the study, please contact the following:

Deirdre E. Robertson
Primary Investigator
414 Garden Lane
Huntington, WV 25705
(304) 733-4003

Thank you for your participation.

Figure 2.1



The chart above demonstrates that there were no significant differences in accuracy for any question but question twelve (Depression causes suicide), in which accuracy did differ with a 0.03 level of significance. The results for question eight (Antidepressants are non-habit forming) demonstrate that the respondents disagreed significantly with the correct statement provided in the commercial corresponding with that question; the researcher can only infer that the participants had outside knowledge that contradicted with the question. The overall inference is that there is no direct link between the advertisement conditions and participants' responses.

Figure 3.1

Questionnaire:

The following is to determine demographics; please answer honestly

Age:

Major:

Gender: Male or Female

The following survey is meant to measure attitudes and perceptions of depression and its treatment.

Please answer the questions as honestly as possible in order to achieve the best results. Please follow the directions carefully.

Please circle T for statements you consider true, or circle F for the statements you consider false.

1. Depression is a mental disorder.

T **F**

2. Depression has genetic traits.

T **F**

3. Women are more likely to suffer from a depressive disorder.

T **F**

4. Anti-Depressants will not cause withdrawal symptoms when ceased abruptly.

T **F**

5. Someone suffering from Depression is likely to be irritable and aggressive.

T **F**

6. Depression is a disease.

T **F**

7. Depression is caused by a chemical imbalance in the brain.

T **F**

8. Anti-depressants are non-habit forming.

T **F**

9. Depression can be a chronic problem.

T **F**

10. Depression can have physical symptoms, such as headaches, digestive disorders, and chronic pain.

T **F**

11. People suffering from Depression tend to suffer from a sleeping disorder, such as hypersomnia or insomnia.

T **F**

12. Depression causes suicide.

T **F**

13. Anti-depressants can have physical side-effects.

T **F**

14. Depression is a common problem; most people will experience or come in contact with depression at some point during their lives.

T **F**

15. Depression can be diagnosed in one doctor's visit, and treatment can be decided in the same visit.

T **F**

Figure 4.1

Story Board for Commercial with Misleading Statements

Commercial begins from black. Down-tempo music plays softly in background throughout “depressed” sequence.

Voiceover throughout “depressed” sequence: One in six Americans suffers from depression each year. Many others go undiagnosed. Depression affects everyone, but recent studies have shown that women are twice as likely to suffer from depression. Most people will come in contact with depression at some point during their lives, and it can be hard to understand. Depression is caused by a chemical imbalance in the brain. Depression causes suicide, so it is important to seek medication and further treatment.



Commercial shifts to “recovery” sequence. Music shifts to up-tempo, quietly plays in background.

Voiceover throughout “recovery” sequence: Medication can correct the imbalance and improve depressive symptoms. Anti-depressants are non-habit forming and do not cause withdrawal symptoms when ceased. Talk to your doctor. You and your physician can agree on a diagnosis and a treatment plan in just one visit. People taking MAOIs or who have liver or kidney problems should not take anti-depressants.

