TREATING A KNOWN DISEASE WITH AN UNKOWN CAUSE:

An analysis of antidepressant advertisements in popular magazines

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ABSTRACT

I investigate various dimensions of direct-to-consumer (DTC) advertising of antidepressant medication; specifically causes of depression, self-diagnosis, benefits and risks, and type of appeal used in the advertisements. My study tracks the history of depression, the development of antidepressant medication, and the regulation of psychotropic drug advertisements. My data utilizes all advertisements that appeared since 1995 in the 26 most popular consumer magazines. I analyze these advertisements both by brand and by what magazine the ad appeared in. My findings indicate that this DTC advertising does an adequate job of addressing the causes of depression, does not overly encourage self-diagnosis, mentions side-effects more frequently than benefits but minimizes their severity, and overwhelmingly frames depression as a white, adult female condition.

ACKNOWLEDGEMENTS

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I. INTRODUCTION

Direct-to-consumer advertising of pharmaceuticals has become a topic of interest in the United States in recent years. The U.S. is one of only two nations in the world that allow such advertising directly to the consumer, and the ramifications of this policy are still unknown. The issues of whether such a policy should exist at all, or should continue but with more stringent regulations, is currently being debated. Much research has been done on the subject, but controversy still remains. The Federal Drug Administration's Center for Drug Evaluation and Research conducted research on this topic and compiled a report to the nation in 2003. They found both positive and negative effects of DTCA, especially on the doctor-patient relationship. On the positive side, it was found to increase disease awareness. The ads made consumers more aware of conditions and treatments as well as motivating patients to see their healthcare provider. On the other hand, several negative effects were found. First, patients might demand drugs and physicians might feel pressure to prescribe such medication, hence increasing prescribing rates where they might be unnecessary. In addition, both patients and doctors believed that the advertisements overstated drug efficacy and did not provide a fair balance of risks and benefits (CDER, 2005).

In this study, I will examine the latter issue through an analysis of print advertisements for one class of psychotropic drugs: antidepressants. The paper proceeds as follows. In the next section, I will provide a brief history of clinical depression, antidepressant medication, pharmaceutical drug advertising and review the existing literature on psychotropic drug advertising. In Section III, I describe my research objectives, the data I use, and my methods. Section IV will present the results to my

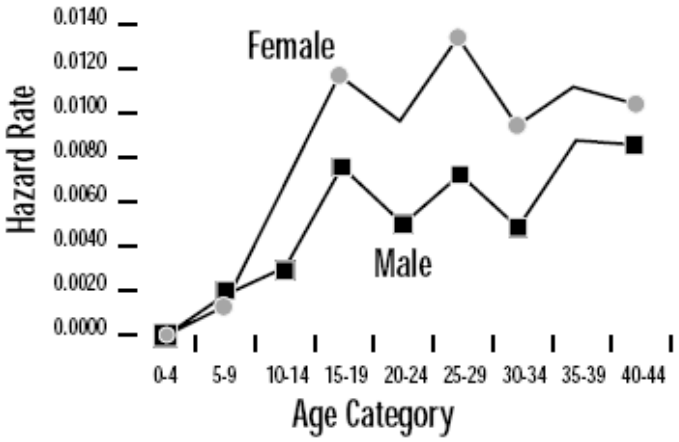
analysis. In the final section I discuss the implications for broader debate and make recommendations for potential policies.

II. BACKGROUND INFORMATION

A. How Depression Became A Clinical Disease

1. The History of Clinical Depression and its Prevalence

Clinical depression is a serious mental illness that affects about 16 percent of the population on at least one occasion in their lives and is currently the leading cause of disability in the United States as well as other countries (Blanc, 1997; Murray & Lopez, 1997). Also known as severe depressive disorder or major depressive disorder, it is defined by the Encyclopedia Britannica as a "neurotic or psychotic disorder marked by sadness, inactivity, difficulty in thinking and concentration, a significant increase or decrease in appetite and time spent sleeping, feelings of dejection and hopelessness, and sometimes suicidal tendencies." Depressive disorders affect approximately 18.8 million American adults or about 9.5 percent of the U.S. population age 18 and older in a given year. The rate of diagnosed depression has almost doubled over the last fifty years. Nearly twice as many women (twelve percent) as men (seven percent) are affected by a depressive disorder each year (NIMH, 2006). The following graph demonstrates the differences in risk of depression by gender as well as age. Hazard rate refers to the chance an individual will incur the event each year per 1000 people (Cook & Leuchter, 2001).



Kessler RC et al. *J Affect Disord.* 1993;29:85–96.

FIGURE 1

RISK OF DEPRESSION BY AGE AND GENDER

It is clear that the chance an individual will experience depression is higher for females than males at all ages, 9 – 44. However, the hazard rate increased with age for both females and males. Both genders experience peaks at 15 – 19 and 25 – 29.

The severity of this disease is by no means minimal. Depression will be the second largest killer after heart disease by 2020; fifteen percent of depressed people will commit suicide (WHO, 2001). It results in more absenteeism than almost any other physical disorder and costs employers more than $51 billion per year in absenteeism and lost productivity, not including high medical and pharmaceutical bills. However, eighty percent of depressed people are not currently receiving any treatment. Surprisingly, pre-schoolers are the fastest-growing market for antidepressants, with at least four percent of preschoolers currently diagnosed as clinically depressed (Murray & Fortinberry, 2005). The use of antidepressants in pediatric patients as a whole has rapidly increased, especially over the past decade (Laurel et al, 2005).

The modern idea of depression links to the much older concept of melancholia, dating back to the time of the Ancient Greeks. Although in its modern context "melancholy" applies to the mental or emotional symptoms of depression, historically "melancholia" could be physical as well as mental, and melancholic conditions were classified as such by their common cause rather than by their properties. In historic writings there have always been observations of people “being blue”, “feeling sad for no reason”, or “having no motivation to do anything”. For example, the Bible and works by Hippocrates and Homer contain subjects of melancholy. However, the modern meaning and consequently diagnosis of depression itself did not exist before 1900. Around the year 1900, a dominant figure in American psychiatry named Adolf Meyer proposed using the term *depression* to designate a downturn of mental energies, of an as yet unspecified nature. The concept of depressive psychoses began to take hold and became a staple in American psychiatry (Britannica, 2007).

2. The Current Method of Diagnosis: DSM-IV TR

An individual is diagnosed with depression when they meet a sufficient number of the symptom criteria for the spectrum suggested by the American Psychiatric Association’s *Diagnostic and Statistical Manual of Mental Disorders* or DSM. The DSM is the handbook used most often in diagnosing mental disorders in the United States. The DSM has gone through five revisions (II, III, III-R, IV, IV-TR) since it was first published. This manual was initially developed to give more objective terms for psychiatric research. Before its creation, communication between psychiatrists (especially in different countries) was difficult and hence diagnoses tended not to be uniform. The

establishment of specific criteria was also an attempt to facilitate mental health research. The multi-axial diagnostic system attempts to yield a more in-depth description of the condition.

The classification system of the DSM and its subsequent categories are based on a process of consultation and meetings involving primarily psychiatrists. Therefore, the content of the DSM does not reflect all opinions on the subject of psychopathology, emotional distress and social functioning, nor are there any objective, biologically verifiable standards to which it adheres. The criteria, and the way they are applied by individual clinicians, are at least to some extent influenced by cultural variables and are periodically altered to reflect the contemporary social landscape. There are currently no medical tests such as a brain scan or blood test for depression. However, certain illnesses, including cardiovascular disease, hepatitis, mononucleosis, hypothyroidism, and organic brain damage caused by degenerative conditions such as Parkinson disease or Multiple Sclerosis may contribute to depression (NIMH, 2001).

3. Symptoms of Depression

Clinical depression is characterized by interlocking physical, affective, and cognitive symptoms. According to the DSM-IV-TR criteria for diagnosing a major depressive disorder, one of the following two elements must be present for a period of at least two weeks:

- Depressed mood, or
- Anhedonia (a patient's inability to experience pleasure from normally pleasurable life events such as eating, exercise, and social/sexual interactions)

It is sufficient to have either of these symptoms in conjunction with five other symptoms over a two-week period. These include:

- Feelings of overwhelming sadness and/or fear, or the seeming inability to feel emotion (emptiness).
- A decrease in the amount of interest or pleasure in all, or almost all, daily activities.
- Changing appetite and marked weight gain or loss.
- Disturbed sleep patterns, such as insomnia, loss of REM sleep, or excessive sleep (Hypersomnia).
- Psychomotor agitation or retardation nearly every day.
- Fatigue, mental or physical, also loss of energy.
- Intense feelings of guilt, helplessness, hopelessness, worthlessness, isolation/loneliness and/or anxiety.
- Trouble concentrating, keeping focus or making decisions or a generalized slowing and dulling of cognition, including memory.
- Recurrent thoughts of death (not just fear of dying), desire to just "lay down and die" or "stop breathing", recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.
- Feeling and/or fear of being abandoned by those close to one.

Other symptoms often reported but not usually taken into account in diagnosis include:

- Self-loathing
- A decrease in self-esteem.
- Inattention to personal hygiene.
- Sensitivity to noise.
- Physical aches and pains, and the belief these may be signs of serious illness.
- Fear of 'going mad'.
- Change in perception of time.
- Periods of sobbing.
- Possible behavioral changes, such as aggression and/or irritability.

4. Causes of Depression

A number of things are believed to contribute to clinical depression. For some people, many factors seem to be involved, while for others a single factor can cause the illness. Other times, people can become depressed for no apparent reason.

- **Genetic** - A family history of clinical depression increases the risk for developing the illness. The National Institute of Mental Health declared in a 2004 press release that "major depression is thought to be 40-70 percent heritable, but likely involves an interaction of several genes with environmental events" (NIMH, 2004)
- **Biological** - People with depression typically have too little or too much of certain brain chemicals that transmit information called "neurotransmitters." Changes in these brain chemicals may cause or contribute to clinical depression.
- **Cognitive** - People with negative thinking patterns that are self-defeating and distorted as well as low self-esteem are more likely to develop clinical depression. Depressed people who are able to make corrections in their thinking patterns can show improved mood and self-esteem.
- **Gender** – Women experience clinical depression at a rate that is nearly twice that of men. Reasons for this phenomenon include the hormonal changes that women go through during menstruation, pregnancy, childbirth and menopause.
- **Situational** – Early experiences such as death of a parent, abandonment or rejection, neglect, chronic illness, and physical, psychological, or sexual abuse can increase the likelihood of depression later in life. Difficult life experiences including job loss, poverty, financial difficulties, divorce, or the death of a loved one can contribute to clinical depression.
- **Co-morbidity** – Clinical depression is more likely to occur along with certain illnesses including: cardiovascular disease, hepatitis, mononucleosis, hypothyroidism, and organic brain damage caused by degenerative conditions such as Parkinson disease, Multiple Sclerosis, or Alzheimer's disease (Britannica, 2007).

5. Types of Depression

Major Depression, or Major Depressive Disorder (MDD), is characterized by a severely depressed mood that persists for at least two weeks. It is specified as either a "single episode" or "recurrent". Periods of depression may occur as discrete events or as

recurrent over the lifespan. Clinical depression usually refers to acute or chronic depression severe enough to need treatment. Episodes of major or clinical depression may be further divided into mild, major or severe.

Diagnosticians further categorize several subtypes of Major Depressive Disorder including: Depression with Catatonic Features, Depression with Melancholic Features, Depression with Atypical Features, and Depression with Psychotic Features. Other affective disorders related to depression include Dysthymia (long-term, mild depression that lasts for a minimum of two years), Bipolar I Disorder (an episodic illness in which moods may cycle between mania and depression), Bipolar II Disorder (an episodic illness defined primarily by depression but evidences episodes of hypomania), and Postpartum or Post-Natal Depression (clinical depression that occurs within two years of childbirth).

It is important to discuss other non-depressive illnesses for which antidepressants might be prescribed for both off and on label use. Antidepressants are useful in a range of disorders other than depression such as social anxiety disorder (SAD), generalized anxiety disorder (GAD) , post-traumatic stress disorder (PTSD), premenstrual dysphoric disorder (PMDD), and obsessive compulsive disorder (OCD). Antidepressants can also sometimes help in bulimia nervosa.

B. Development of Antidepressant Medication

1. The Discovery of Antidepressants

After World War II, an entire category of drugs was discovered to treat depression. The 1950s witnessed the emergence of two classes of psychotropic drugs: antipsychotics and antidepressants. Antipsychotics or neuroleptics are a group of drugs

used to treat psychosis. Common conditions with which antipsychotics might be used include schizophrenia, mania and delusional disorders. The term antidepressant refers to a drug that helps to rectify specific abnormalities that give rise to the symptoms of depression.

In 1952, the first antipsychotic drug, chlorpromazine was discovered. Chlorpromazine was the first drug to show specificity for psychiatric disturbances and its sedative effects had an onset within only one hour. The delayed effects were even more dramatic; patients who had been deluded and hallucinating for a decade emerged from their psychoses for the first time (Healy, 1997). The use of chlorpromazine spread like wildfire through American asylums. Though many were hesitant to view this drug as a "breakthrough," the discovery was significant for the institution of psychopharmacology. The mix of elements that went into making chlorpromazine was essential to paving the way for antidepressant discovery.

The first two classes of drugs used to treat major depression were the tricyclic antidepressants (TCAs) and monoamine oxidase inhibitors (MAOIs). Like chlorpromazine, the development of the first TCA, imipramine, came from an interest in antihistamines. It began as research on one specific compound and during 1950 was given to a wide range of clinicians to test (including some psychiatrists). One of the psychiatrists asked to test the drug was Roland Kuhn, at the Münsterlingen Hospital near Konstanz, Germany. He treated over five hundred patients over a three-year period and found that this compound was a mood lifter without being a stimulant. Patients experienced an increase in vivacity and a restoration of interest in activities and social interactions. Sleep was restored in a normal and refreshing manner and appetite was

stimulated. Kuhn also noted all the adverse effects which are now associated with TCAs. These include anxiety, sedation, weight gain, cardiac arrhythmias, orthostatic hypotension, and anticholinergic effects such as dry mouth, blurred vision, urinary retention, constipation and cognitive dysfunction. From 1956 to 1957, many experts were called in to decide whether there would even be a market for such a compound. Though it is difficult to understand now, at this time depression was not seen as such a widespread illness and was suffered by most in silence. In the United States, virtually all serious mental illness was diagnosed as schizophrenia. Therefore, people who suffered the most extreme symptoms of depression, complete loss of sleep and appetite, were committed to asylums and given Electro convulsion therapy (ECT), (the popular treatment for schizophrenia). At this time, there was no such thing as outpatient psychiatry. However, treatment using this compound was undeniably effective. It was launched in Switzerland in November of 1957, and by the spring of 1958 it had been launched in a number of other European countries. It was given the name imipramine (brand name Tofranil) and began being prescribed in the United States in 1959 (Healy, 1997).

The discovery of the monoamine oxidase inhibitor iproniazid in 1957 was the first "modern" antidepressant. The discovery is credited to Nathan Kline who at the time was an assistant clinical professor of psychiatry at Columbia University and director of the research facility at Rockland State Hospital in New York. Iproniazid was initially developed as an antitubercular drug in the early 1950s. However, in addition to treating tuberculosis, it was observed by other clinicians to elevate mood and stimulate activity in many patients. In 1956, Kline began a project to investigate the effects of iproniazid by

giving it to seventeen patients diagnosed as having schizophrenia. It was found that two-thirds of patients showed some response. It was reported in newspapers at the time that patients were dancing in the wards even though they had holes in their lungs (Zeller et al, 1952). The *New York Times* informed the public at the time that "The drug…has produced 'remarkable' mood improvement and activity among long-term 'untouchable' psychotics of the 'burned-out' kind as well as among non-hospitalized neurotics." Soon thereafter iproniazid was widely prescribed to patients. Within the first year it was available four hundred thousand depressed people were treated with this medication. However, MAOIs (like TCAs) have a number of adverse reactions which include sedation, confusion, and cardiac arrhythmias. In addition, MAOIs are related to many drug-food interactions such as the tyramine reaction when MAOIs are combined with cheese, wines and beer.

By the 1960s, recognition of depression as a mental illness began to increase. The World Health Organization (WHO) set up studies to establish the prevalence of depression. They concluded that up to 100 million people worldwide were probably depressed on any given day. In 1958, Merck (a global research-driven pharmaceutical company established in 1891) approached a number of U.S. investigators including Nate Kline to investigate a molecule named amitriptyline for antischizophrenic properties. One of the investigators, Frank Ayd, realized that this molecule was almost identical to imipramine, and encouraged Merck to launch a trial of the compound for use in treating depression. Results of these trials indicated that it appeared to help the same kind of patients that benefited from imipramine and had a similar dose range and side effects. As a result of these trials, amitriptyline was launched in 1961 for the treatment of depression

by Merck and two other pharmaceutical companies (Roche and Lundbeck). Through the efforts of these companies worldwide distribution was established and amitriptyline became the first commercially viable antidepressant product. It became clear for the first time that there was money to be made out of antidepressants, even though the non-hospitalized depression market was thought to be relatively small.

Despite the fact that there were clear differences between the various compounds of antidepressants, they were grouped into one category of antidepressants sufficient to sustain sales. This continued to be the case until the late 1970s. During this time, pharmaceutical companies developed an increasing interest in the issues of the detection of depression in primary care and that in many cases depressive disorders needed long-term treatment. This led to a plethora of research that played a significant part in company decisions to proceed with the development of the next major class of antidepressants (Healy, 1997).

2. Selective Serotonin Reuptake Inhibitors (SSRIs) and "Novel" Antidepressants

Selective serotonin reuptake inhibitors (SSRIs) were developed in order to effectively work on the symptoms of depression without having the side effects of TCAs and MAOIs. This is due to the specific pharmacologic activity of the SSRIs that precludes them from many of the problems of patience tolerance and toxicity associated with both TCA and MAOI use (Sanacore). The establishment of SSRIs occurred over a relatively short period of time. They were developed based on the knowledge gained from studying the effects of the TCAs. As opposed to the chance discoveries of both TCAs and MAOIs, SSRIs were the result of 'rational' drug development. This approach

specifically targets the fundamental brain mechanisms that are important in the pathophysiology underlying a syndrome such as depression. The first SSRI to be marketed in the United States, fluoxetine (brand name: Prozac), was released in 1988 by the pharmaceutical company Eli Lilly. After the infiltration of SSRIs into the antidepressant market, newer drugs were developed that are considered "novel" antidepressants. They are SSRIs with unique mechanisms of action. They were developed in an attempt to improve efficacy while decreasing side effects. These include Selective-norepinephrine reuptake inhibitors (SNRIs), Norepinephrine reuptake inhibitors and Noradrenergic and specific serotonergic antidepressants (NaSSAs). These classes of drugs have supplanted TCAs as the antidepressant of first choice by physicians because of their greater safety and tolerability as well as comparable efficacy. The number of people using SSRIs and the newer "novel" antidepressants increased from 7.9 million in 1996 to 15.4 million in 2001. Simultaneously, the number of people using the older TCAs decreased from 2.3 million to 1.2 million. It is clear from these statistics that the newer antidepressants are replacing the older drugs and that many more people are receiving such treatment (Zuvekas, 1996). Table 1 is a history of all antidepressant drugs, their generic and brand names, category of antidepressant, and year of introduction (Bruck, 1992).

TABLE 1

ANTIDEPRESSANT DRUGS, CATEGORY, AND YEAR OF INTRODUCTION

GENERIC NAME	BRAND NAME	CATEGORY	YEAR
Phenelzine	Nardil	MAOI	1959
Imipramine	Tofranil	TCA	1959
Tranylcypromine	Parnate	MAOI	1960
Isocarboxazid	Marplan	MAOI	1960
Amitriptyline	Elavil/Endep	TCA	1961
Desipramine	Pertofran	TCA	1963
Nortriptyline	Aventyl/Pamelor	TCA	1963
Protriptyline	Vivactil	TCA	1966
Trimipramine	Surmontil	TCA	1966
Iprindole	Prondol	TCA	1968
Dothiepin	Prothiaden	TCA	1969
Doxepin	Adapin/Sinequan	TCA	1969
Clomipramine	Anafranil	TCA	1970
Maprotiline	Ludiomil	NRI	1974
Viloxazine	Vivalin	NRI	1974
Butriptyline	Evadyne	TCA	1975
Mianserin	Bolvidon	Tetra	1976
Trazodone	Desyrel	Tetra	1980
Lofepramine	Gamanil	TCA	1983
Fluvoxamine	Luvox	SSRI	1987
Amoxapine	Asendis	TCA	1989
Fluvoxetine	Prozac	SSRI	1988
Sertraline	Zoloft	SSRI	1991
Paroxetine	Paxil	SSRI	1992
Citalopram	Celexa	SSRI	1998
Venlafaxine	Effexor/Effexor XR	SNRI	1993/ 1997
Nefazodone	Serzone	SNRI	1994
Mirtazapine	Remeron	NaSSA	1996
Bupropion	Wellbutrin/ Zyban	Norep	1996
Escitalopram	Lexapro	SSRI	2002

KEY

MAOI = Monoamine oxidase inhibitor
TCA = Tricyclic antidepressants
SSRI = Selective serotonin reuptake inhibitor
Norep = Norepinephrine reuptake inhibitor
Tetra = Tetracyclic antidepressants and:
NRI = Norepinephrine reuptake inhibitor
SNRI = Selective-norepinephrine reuptake inhibitor
SSRE = Selective serotonin reuptake enhancer
NaSSA = Noradrenergic and specific serotonergic antidepressant

3. Proliferation

In recent decades, there has been a significant increase in the overall rate of psychotropic medication prescribing, especially for antidepressants. Over the last fifteen years antidepressants have been accepted among the mainstream patient population, and a recent study showed that physicians are prescribing antidepressant medications to their patients at a far greater rate than they did just two decades ago (Antonuccio et al, 2002). The prescription rate for antidepressants rose 34 percent between 1985 and 1999. In 1999, three of the top ten best-selling pharmaceuticals were the SSRIs Prozac, Paxil, and Zoloft, accounting for combined revenues of $6.7 billion (Antonuccio et al, 2002). From 2000 – 2001, $10.4 billion was spent on the four top-selling antidepressants alone: Zoloft, Paxil, Wellbutrin, and Celexa (In 2001, Lilly's patent on Prozac expired) (Stefanova, 2001). Among adolescents, antidepressant use has also increased rapidly. Overall, child antidepressant use increased by 9.2% each year from 1998 to 2002 (coy.state, 2005).

The reader is referred to Table 2 for current National Rates of Treatment of Depression stratified by sociodemographic characteristics (Olfson et al, 2002).

TABLE 2

Table . National Rates of Treatment of Depression in 1987 and 1997 Stratified by Sociodemographic Characteristics*

Characteristic	Rates per 100 Population of Treated Depression		
	1987 (N = 34 459)	1997 (N = 32 636)	χ^2†
Total	0.73	2.33	158.6
Age, y			
<18	0.28	.68	11.1
18-64	0.97	3.17	137.8
≥65	0.57	1.95	24.2
Sex			
Female	1.00	3.06	114.9
Male	0.46	1.58	55.3
Race/ethnicity			
Black	0.28	1.02	13.8
Hispanic	0.38	1.41	21.6
White‡	0.84	2.69	137.4
Marital status			
Married	0.75	2.30	79.1
Divorced/separated	1.61	5.50	40.2
Widowed	1.11	3.46	16.1
Not married	0.93	2.82	34.7
Education			
<High school	0.69	1.66	25.5
High school	0.81	3.00	66.3
>High school	1.19	3.13	57.1
Employment status			
Employed	0.63	1.87	88.6
Unemployed	1.00	3.82	82.3
Insurance			
Private insurance	0.77	2.16	103.7
Public insurance	0.74	3.17	84.8
No insurance	0.48	1.54	15.4

*Data are from 1987 National Medical Expenditure Survey and 1997 Medical Expenditure Panel Survey.
†$df = 1$, $P<.001$.
‡White includes white, American Indian, Alaska native, and Asian or Pacific Islander.

In the ten year span of 1987 – 1997, national rates of treatment of depression increased from 0.73 per 100 population of treated depression to 2.33. The sociodemographic characteristics of people that have the highest rates of treated depression are ages 18 – 64, white females, who are divorced or separated and unemployed. In addition, there are

higher rates when the individual has completed an education beyond high school and receives public insurance.

Though antidepressants were hailed in the 1980s and 1990s as a cure-all for the rapidly growing problem of depression, they may not be the panacea that everyone believes them to be; various problems exist in regard to this medication. Sometimes they have intolerable side-effects that include: dry mouth, urinary retention, blurred vision, constipation, sedation, sleep disruption, weight gain, headache, nausea, diarrhea, abdominal pain, loss of libido, agitation and anxiety. They do not work for 47% of the population and they may lose their effectiveness over time. In fact, the FDA recommends taking them for no more than a short period of time (Murray & Fortinberry, 2002).

C. The History of Psychotropic Print Drug Advertisements

As soon as psychotropic drugs were invented, avenues developed to advertise them. The first major push in print psychotropic drug advertising in the United States began in the late 1940s. Early advertisements were featured in professional medical journals and promoted both antipsychotic and antidepressant medication. In a time when the country was recovering from the trauma of World War II, advertisements featuring these drugs promised ways to assist this wounded population. The ads offered treatments for sleepless nights, psychoneurotic symptoms as well as an overall improved outlook on life. The discovery of Chlorpromazine and iproniazid in the 1950s contributed to the establishment and subsequent growth of psychotropic drug advertising.

Throughout the 1950s these advertisements expanded to include not only the "everyday person" but also were aimed at those mentally ill patients who were previously hospitalized. As these individuals were trying to piece together their lives in the outside world, advertisements featured former patients working happily alongside other productive and "normal" citizens. This first decade of psychotropic drug print advertising represented a social equilibrium where gender roles were solidified. Families were reunited, men returned to work and women returned to their domestic responsibilities. Over the next several decades and into the present, there was an explosion of psychotropic drug advertisements. These advertisements (especially for antidepressants) have penetrated our mass media through print advertising and television. Undeniably, these advertisements have a powerful effect on our country's prescription medication market (Rubin, 2004).

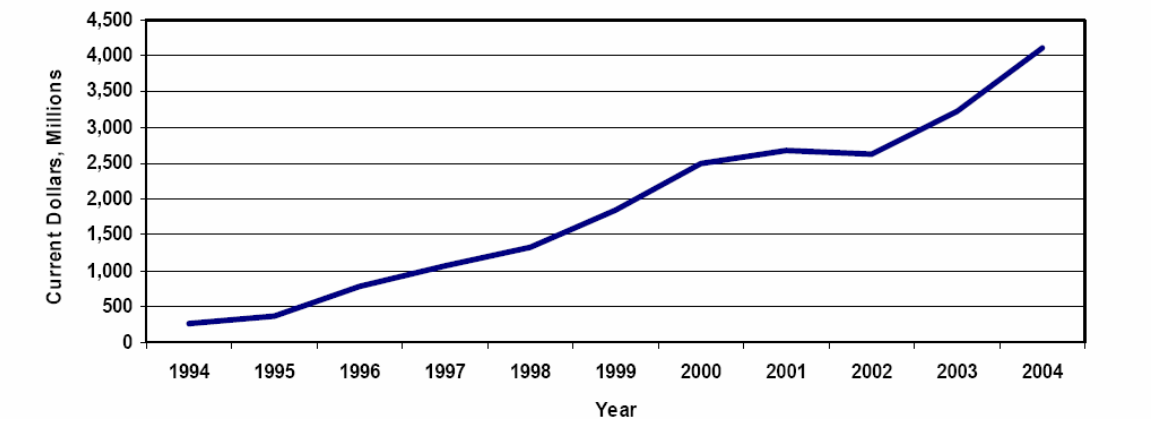
1. Pharmaceutical Marketing Regulations

Regulations regarding prescription drug promotion are limited in many parts of the world. As of 2004, less than one-sixth of countries had a well-developed system of drug regulation while one-third of countries had little to no regulatory capacity (Mintzes, 2006). The United States, on the other hand, has an agency that regulates prescription drug promotion directly. The Food and Drug Administration (FDA) is the federal agency responsible for ensuring drug safety and that these products are honestly, accurately and informatively represented to the public. The Center for Drug Evaluation and Research (CDER), a sub agency of the FDA, assures that safe and effective drugs are available to the American people. CDER was established to assess significant drug problems in the

marketplace on the eve of the 1906 Pure Food and Drugs Act. This act prohibited interstate commerce of mislabeled and adulterated drugs. Since this time, this agency has transformed and witnessed much important legislation on the issue of pharmaceutical drug advertising.

The FDA began regulating the pharmaceutical industry in 1938 by addressing advertising to physicians. These early regulations are still the standard by which all drug advertising is judged and applied today to consumer advertising. The FDA re-regulated the advertising of prescription drugs in 1962 under the Federal Food, Drug, and Cosmetic Act. These regulations established detailed requirements for ad content. On October 10, 1962, President Kennedy signed into law the Drug Amendments of 1962, also known as the Kefauver-Harris Amendments. These Amendments required drug manufacturers to prove to the FDA that their products were both safe and effective prior to marketing. They also gave FDA control over prescription drug advertising (Berndt).

Direct-to-consumer (DTC) advertising, the focus of my study, had its inception in the early 1980s with the first direct-to-consumer advertisement for a pneumonia vaccine Pneumovax® (Merck & Co., Inc.) which appeared in *Reader's Digest* in 1981 (Woolshin et al, 2001). As shown in Figure 2, the level of DTC advertising has grown considerably since 1994. Spending stayed fairly steady between 2000 and 2002 then increased substantially from 2002 onward.



Source: IMS Health and Competitive Media Reports (Berndt, 248)

FIGURE 2

TREND IN DIRECT TO CONSUMER ADVERTISING SPENDING, 1994−2004

DTC advertising has been defined as "any promotional effort by a pharmaceutical firm to present prescription drug information to the general public through lay media." DTC advertising of prescription drugs is legal in only the United States and New Zealand (Mintzes, 2006). Since DTC advertising first appeared, it has generated a great deal of controversy. Prescription drug companies have argued that these advertisements provide educational benefits to consumers. They claim that this form of advertising is an advantage to consumers because they can gain access to information about disease and treatments and are prompted to discuss stigmatized conditions with their physician that they might otherwise not discuss, such as erectile dysfunction or depression. In a sense, it is believed by some that DTC advertising "facilitates patient-physician interaction" (Curry et al, 2005). Also, DTC ads can remind patients to get their prescriptions refilled and help them adhere to their medication regimens. On the other hand, many argue that

educational content in these advertisements is limited and that they are geared more toward promotion than education.

In 1983, the FDA started to become concerned about the potential detrimental effects of these advertisements on the public. They issued an advertising moratorium while they studied this issue. They concluded that “direct to public prescription advertising was not in the public interest” (Cohen, 1988). Regardless, the FDA granted drug companies the right to advertise directly to the public in 1985 due to concerns about freedom of speech as well as a general consensus that regulations already in place were sufficient enough to protect the consumer. The FDA then set out specific guidelines that had to be followed (see Appendix 1). In general, prescription drug ads must contain information in a "brief summary" relating to both risks and benefits. The specific criteria to be met included that they present true information about the side-effects of their drugs, and their contraindications and effectiveness. In addition, advertisements cannot be false or misleading and cannot omit material facts. FDA regulations also call for "fair balance" in every product-claim ad. This means that the risks and benefits must be presented with comparable scope, depth, detail, and that information relating to the product's effectiveness must be fairly balanced by risk information. The FDA does not generally require prior approval of DTC ads, although companies are required to submit their ads to the FDA at the time they begin running. The agency, therefore, routinely examines these published DTC ads after they become available to the public.

In 1997, the FDA modified its policy and relaxed their restrictions on DTC advertising. It’s regulations of prescription drug advertising were clarified, particularly

for television ads. Instead of requiring a "brief summary" of contradictions, side-effects, and effectiveness, advertisements only needed to include "major statements" of risks and benefits. In addition, it was further required to provide information sources in addition to a physician, such as a phone number or website (Berndt, 223-4). This new focus on consumers led to an explosion of DTC advertising, as well as huge increases in print and television advertising budgets. Expenditures on DTC advertising more than quintupled in 1997-2004 from $700 million in 1997 to more than $4 billion in 2004. The drugs that are advertised are limited in range; just 20 prescription drugs account for about 60 percent of the total industry spending on DTC advertising (Hollen, 2005).

On August 2, 2005, the Pharmaceutical Research Manufacturers of America (PhRMA) released its voluntary code of conduct for DTC advertising of pharmaceuticals (see Appendix 2). This code of conduct is not binding but instead may be voluntarily adopted by individual drug manufacturers. Their release was the pharmaceutical industry's efforts to repair their tarnished public image due to growing criticism of DTC advertising. These concerns about the best interests of consumers still exist and are at the heart of the heated debate about DTC advertising (Grow et al, 2006).

D. Literature Review

Several previous studies have investigated various relevant aspects of psychotropic drug advertisements. In Gerry V. Stimson's article, "The Message of Psychotropic Drug Ads," he argues that psychotropic drug ads construct a certain type of reality where certain problems of living in the world are viewed as medical problems. He argues that these ads do not only define certain life events or situations as illnesses but

also define certain types of people as potentially in need of such drugs. He claims that diagnostic criteria for the use of these drugs are vague, and that a clear message found in these advertisements is that women are more likely than men to be candidates for these drugs.

A more recent study, "'Your Life is Waiting!' Symbolic Meanings in Direct-to-Consumer Antidepressant Advertising" by Jean M. Grow et al, was published in the *Journal of Communication Inquiry* in 2006. This study is noteworthy because of its specific focus on the advertising of antidepressant medication. Grow's analysis demonstrates how pharmaceutical companies strategically frame depression with DTC advertising. They analyzed six years of print advertising from August 1997 to August 2003 in *Reader's Digest* and *Time* and found that antidepressant advertisements privilege benefits over risks, fail to adequately educate consumers, and frame depression as a female condition. One main weakness in this study is that the print advertisements used come only from *Reader's Digest* and *Time* magazines; therefore their data is missing a number of advertisements that appeared in other magazines. In addition, the advertisements they analyze only represent the three major brands: Prozac, Zoloft and Paxil. However, this study is significant to my research because of their findings that risks as opposed to benefits are underprivileged in these ads both literally and symbolically. Furthermore, they found that because depression is overwhelmingly framed as a female disease, it complicates diagnosis by perpetuating over diagnosis among females and under diagnosis among males (Grow et al, 2006).

Another study relevant to my research is one that appeared in *The Lancet* in 2001 titled "Direct-to-consumer advertisements for prescription drugs: What are Americans

being sold?" Woolshin, Schwartz, Tremmel and Welch aim to establish what messages are being communicated to the public in DTC advertisements. They found that within the 67 advertisements they analyzed, promotional techniques used included emotional appeals in 67% of the ads, and encouragement of consumers to consider medical causes for their experiences in 39% of the ads. Furthermore, these ads described the benefits of medication in vague, qualitative terms (87%) more often than with factual data (13%). They found that only half of the advertisements used data to describe side-effects and it was generally indicated that these side-effects occurred infrequently. The methods they employed in their content analysis are similar to methods I will use in my research. However, though their results are significant, they use quite a limited time frame for their analysis. Their sample used ten popular magazines, and examined only the first issue of every magazine in every other month between July, 1998 and July, 1999 (Woolshin et al, 2001).

The article "Suffering, Pharmaceutical Advertising, and the Face of Mental Illness" published by Joseph E. Davis is also relevant to my research. In his article, Davis investigates how mental illness is usually represented in print ads, what such images signify about suffering, and what response they are designed to elicit. He argues that if the function of DTC ads are to prompt sufferers of mental illness to recognize their problem and get professional help, then there is the idea that marketers can accurately capture and visually display how mental illnesses look and feel. In doing so, they show very little distinction between mental illness and everyday suffering and use vaguely termed benefits over side-effects (Davis, 2006).

III. RESEARCH DESIGN

A. Objectives of the Research

In this thesis, I will investigate various aspects of antidepressant medication advertisements that appeared in magazines for a ten year period from November 1995 to August 2005. Specifically, I analyze the prevalence of four major dimensions of DTC advertising of antidepressants: causes of depression, self-diagnosis, benefits and risks, and type of appeal used in the advertisement. I analyze whether there are any noticeable trends in how this information is conveyed based on the specific brand of antidepressant medication being advertised in addition to which magazines the ads appeared in. I compare brands in order to examine the differences in how various manufacturers advertise their medication. I will examine what magazines the ads appeared in order to determine if the appearance of ads and their characteristics are related to the demographic characteristics of the magazine readership.

The following research questions will be examined in this thesis:

1. Causes of depression:

- How are the causes of depression represented in print advertisements for antidepressant medication?
- Are they framed as medical causes (biological/chemical) or triggered by personal causes? Or, do the ads claim that the cause of depression is both or unknown?
- Do the causes of depression represented in print advertising vary by brand or by the target audience for each magazine?

These questions are important to any examination of antidepressant medication because, according to medical evidence, a number of factors are believed to contribute to

clinical depression and no specific cause has been identified. There are, however, two main theories of causation. The first is the biochemical theory. This theory suggests that mental health disorders, including depression, arise "from internal causes…resulting in impaired social functioning" (Weiss & Lonnquist, 1997). This theory posits that the causes are irregularities in brain chemistry. The other main theory of causation is the psych-social theory. This theory suggests that stressful personal and social situations trigger most depression. Examples of stressful situations can include poverty, marital discord, death of significant others, and low self-esteem (Freden, 1982).

The biochemical theory operates to establish depression as a physiological problem and implies its symptoms can be treated as other similar somatic difficulties that regular physicians treat. In addition, the chemical imbalance explanation excludes other possible explanations for the causes of depression that might negatively reflect on one's character or personality. By ruling out such an explanation, the biochemical theory provides comfort to those who suffer and would ultimately lead to more people taking antidepressant medication (Davis, 2006). I would hypothesize that a majority of ads utilize this biochemical theory approach.

On the other hand, the psycho-social theory implies that medication is not the ultimate answer. It would include references to psychiatrists, "mental illness," or working through complicated issues. I believe that a very small number of ads would include such references. By straying away from the biochemical explanation for the causes of depression, the ads would also be reducing the possibility of efficacy for their product. If the purpose of an ad is to increase sales, it is clear that pharmaceutical companies would limit the mentioning of psych-social causes.

2. Self-diagnosis:

- To what degree do print advertisements for antidepressant medication contribute to preliminary self-diagnosis versus physician consultation?
- Does the degree to which these ads promote self-diagnosis versus physician consultation vary by brand or by the target audience for each magazine?

The question of self-diagnosis is perhaps one of the most debated issues in the area of antidepressant medication advertisements. Depression is undeniably a stigmatized illness because it often carries disgrace or shame stemming from the fear of being labeled according to stereotypes of people with mental health problems. A 2005 Australian study noted that around one quarter of people felt depression was a sign of personal weakness and would not employ someone with depression. Nearly one third felt depressed people "could snap out of it," and 42% said they would not vote for a politician with depression (www.heretohelp). For this reason, consumers are sometimes hesitant to discuss depression with friends and family or to seek information from any mental health resource. Therefore, it is fair to suggest that advertising of antidepressants may target a vulnerable population. These advertisements can be a source of information for people who might not otherwise seek help. Many contend that the objective of prescription drug advertisements is only to increase consumer-generated prescription volume. Hence, it is possible that these advertisements provoke and facilitate an initial "self-diagnosis."

This is a major concern of antidepressant medication advertisements because of its impact on the doctor-patient relationship. The degree to which this advertising promotes self-diagnosis contributes to an overall increase in prescribing rates. When patients request a drug, prescribing rates go up "several fold" which suggest that "physicians may not be the stalwart intermediary that the law assumes." Furthermore, a study found that

close to 80% of physicians oppose these advertisements because they feel it impedes their ability to provide the best possible care to their patients (Kravitz et al, 2005). It is important to see to what extent self-diagnosis is promoted through the use of a checklist of symptoms, a quiz/questionnaire, or a phone number/website because such items might inappropriately increase patient demand for antidepressants and negatively affect the physician-patient relationship.

In this study I examine with what frequency the ads provide symptoms of depression and whether this varies by brand or magazine. Specifically, what symptoms are referred to most frequently in the ads? Also, I am interested in whether the symptoms are presented in a quiz or checklist format. Though the listing of symptoms is a fairly standard technique of DTC advertising strategy, it is important to examine because they are often utilized to make consumers believe that a problem might exist that they did not recognize before or to define an everyday problem or experience in medical terms (Davis, 2006). Furthermore, I examinine how accessible these ads make it to gain more information about depression and its treatments. With what frequency do they provide a phone number, website, or free information/booklets? This can contribute to further self-diagnosis or, on the other hand, can prompt a consumer to consult their physician. The last aspect I look at is whether these ads clearly state to "ask/notify/see your doctor."

3. Benefits and Risks:

- Are benefits listed at all in the ads? If so, which ones and how many are listed?
- Are side-effects listed at all in the ads? If so, which ones and how many are listed?
- Does the frequency and method with which benefits and side-effects are presented vary by brand or by the target audience for each magazine?

The FDA requires that a pharmaceutical advertisement present true information about the side-effects of their drugs and call for a "fair balance" in product claims. The general rule of thumb is to list the top three risks; however this may be grossly inadequate and reveal a clear lack of risk information (Davis, 2006). In addition, the problem is further exacerbated when the ad claims that there is a low occurrence of side-effects, that they are not usually serious or that they are well tolerated. This minimizes the severity of risks that undoubtedly exist. Examining the frequency of benefits and risks is important in examining whether these ads lead to informed decision making by the consumer. Consumers are well served only when they can gain a thorough understanding of the overall risks, benefits, and treatment options.

4. Type of appeal used in the advertisement:

- What types of appeals do print advertisements of antidepressant medications utilize?
- What is the overall nature of the ad appeal?
    - Does the type of appeal vary by brand or by magazine?
- What techniques are used to reach the target market?
    - How many of the ads include pictures of people?
        - Is depression portrayed as a primarily female or male disease?
        - What are their ages and races?
    - Do any of these techniques vary by brand or by magazine?
- What other subtle messaging techniques are utilized?
    - What is the demeanor and social depiction of the people featured in the ads?
    - Do they use any "before/after" techniques to show changes in the demeanor or social depiction of people?
    - Do any of these more subtle techniques vary by brand or by magazine?

An ad appeal refers to how the advertisement convinces the consumer to purchase the product. The nature of the ad appeal describes what marketing technique is used beyond the characteristics of the product. Certain features are generally employed to attract the reader's attention to the advertisement and contribute to the overall appeal. Many ads use more than one advertising technique, and these techniques can be explicitly conveyed or subtly referred to. Visual representations and their interactions within the text in any advertisement are a crucial element in how consumers perceive advertisements. I investigate what specific approaches are used in these ads. Visual images of people are an excellent advertising technique because they are indicative of the target market these ads hope to reach. Diagnosis of depression is consistently higher among females, at a rate of three females to one male (Copeland, 2001). I investigate whether the advertisements reflect this statistic based on the frequency of gender in the advertisements.

The more subtle messages of demeanor and social depiction of both males and females in these ads also are investigated. This is important because the advertisements give accounts or explanations of why or how people come to have problems. The message is that certain life events put people in a position where the prescribing of antidepressants might be appropriate. The demeanor and social depiction of people in these ads is a fundamental way of conveying to the reader that problems may be work conditions, loneliness, personal finances, or relationships with other people. However, instead of changing the situation, these problems can be resolved and the individual can adapt to the situation with the aid of medication (Stimson, 1975). Many times images will depict sufferers in the grip of depression and this is usually signaled by their

physiognomy, posture, and passivity. Other times, ads will show the sufferer after medication has begun and they are "changed." This is portrayed by their appearance and activity.

I choose to focus on the advertisements themselves; to explore message content and their implied meanings. I did not analyze the effect of these ads, the consumer response, or physician's attitudes towards them as other studies have examined. I focused on magazines as opposed to other forms of advertising because readers of magazines are likely to save advertisements for later use, a fact that is important to advertisers (Duuta-Bergman, 2004), and magazines have long been a medium well-suited to introducing new ideas into the mainstream. Also, in 1997 the FDA passed new guidelines for television ads, which stated that prescription drug ads must refer people to more information through a toll-free number, a Web site, or references to print ads (Wilke, 1997). In pharmaceutical advertisements there is an additional page listing a brief summary required by the FDA, but this directives page will not be included in my analysis.

B. Description of Data

In order to investigate the antidepressant medication advertisements, two different data sources will be used:

1. The SCADS Archive

The SCADS archive is a collection of all print advertisements for smoking cessation products, tobacco products, smoking-related public service announcements and prescription drugs that appeared between January 1985 and August 2005 in 26

consumer magazines. The magazine set includes: *Better Homes & Gardens, Black Enterprise, Business Week, Cosmopolitan, Ebony, Essence, Family Circle, Glamour, Good Housekeeping, Jet, McCall's* (name changed to Rosie's on January 1, 2001), *Modern Maturity, Money, National Geographic, Newsweek, People, Playboy, Readers Digest, Rolling Stone, Seventeen, Sports Illustrated, Time, TV Guide, U.S. News &World Report, Vogue*, and *Women's Day*. The SCADS database also includes advertisements from two medical journals: the *Journal of the American Medical Association* and the *New England Journal of Medicine*. Ads in these two medical journals will not be included in this study since the focus is on direct-to-consumer advertising. The magazines in the SCADS database were selected to represent magazines most frequently read by individuals with particular demographic characteristics. 22 groups were defined by race (3 groups), education (5 groups), income (5 groups), age (5 groups), gender (2 groups), and smoking status (2 groups).

Readership data for the magazines that were used to select the magazines in the SCADS database were taken from Simmons National Consumer Survey (NCS). The NCS is a repeated cross-sectional survey. The sample for each wave is independently drawn. The NCS employs a multi-stage stratified probability sample. The final sample represents a representative probability sample of all adults living in households in the U.S. (excluding Hawaii and Alaska). In order to minimize respondent fatigue the data are collected in several phases. In Phase 1 respondents are interviewed (face-to-face). In Phase 1 interviewers collect demographic data and data on the magazines respondents read. To collect this information interviewers present respondents with a deck of cards on each of which is printed the logo of one of the 182 magazines in the Simmons

sample. If a respondent reports that he has read any portion of a magazine he is asked a set of questions about readership, including whether he reads the whole magazine. During the second part of Phase 1 respondents report, by filling out a questionnaire, whether they purchase and use specific products, including pharmaceutical products. Survey response rates in the NCS are generally high (approximately 70 percent) and compare well with other widely-used national surveys.

Using the data on magazine reading from the 1998 NCS of the Simmons Survey of Media and Markets, the ten magazines most frequently read by members of each previously defined demographic group were chosen. Although 22 groups were defined, members of each group often read the same magazines. Consequently, instead of 220 magazines, the final set includes the above 26 magazines. Three magazines were unusable because not all the issues in the sample period could be located. In those three cases the next most widely read magazine for the group in question were substituted. Using magazine circulation data from three independent sources, it was estimated that the 26 magazines in SCADS account for between 30.0 and 57.5 percent of magazines circulating in the US. The lower figure is based on total circulation across 580 magazines reported in Audit Bureau of Circulation's (2003) *Magazine Trend Report*. The higher figure is estimated from readership data for the 172 magazines included in the NCS. The SCADS magazines represent 5% of the 580 magazines in the Magazine Trend Report data but account for 30.0 percent of circulation.

Each advertisement in the database is coded with the brand name, manufacturer name, length of advertisement, and position within the magazine. Undergraduate

research assistants located the advertisements by examining the physical issues of the magazines and journals. The advertisements were then scanned and stored electronically. Ten percent of the issues of each magazine were independently double-checked by a second research assistant. If there was more than a ten percent error rate between the coders, all issues of that magazine were re-coded. Another ten percent sample was double-checked and the process iterated until error rates of all checked samples were below five percent.

The next step was to organize the advertisements into a system of "unique" advertisement binders. Identical ads were given a unique ad number so that duplicate ads did not need to be coded more than once. Unique advertisements are defined as an advertisement for an identified brand that contains different content than another ad for the same product, ranging from a difference of one extra word to a completely different advertising content. Even a small content change constituted classification as a unique ad. A unique ad can appear in a number of different magazines numerous times, but will only constitute as a single unique advertisement. Certain differing features of the advertisement were not considered to constitute a new ad. These include: *ad size*- as long as the ads are identical a change in size did not constitute a new ad. In other words, when a two page ad goes to a one page ad or vice versa, as long as the words are the same, the picture the same, etc. it is not considered a new ad. If the words or pictures get moved around, it is not a new advertisement, as long as everything stays proportionally similar; *publication year*- as long as the ads are identical a change in the copyright date also did not constitute a new ad; *revision year*- similarly, on the information pages, there is a date which indicates the month and the year the information was revised. A change in the

revision date only did not constitute a new advertisement. If even one word changes, however, it was considered a new advertisement. Each unique ad was given a specific "unique ad number." .

Advertisements for antidepressants were found in seventeen of the twenty six magazines:

- Better Homes and Gardens
- Cosmopolitan
- Ebony
- Essence
- Family Circle
- Glamour
- Good Housekeeping
- McCalls-Rosies
- Newsweek
- People
- Reader's Digest
- Sports Illustrated
- Time
- TV Guide
- U.S. News and World Reports
- Vogue
- Woman's Day

Advertisements for antidepressants were not found in the following nine magazines:

- Black Enterprise
- Business Week
- Jet
- Modern Maturity
- Money
- National Geographic
- Playboy
- Rolling Stone
- Seventeen

The magazines were categorized into four different groups based on a factor analysis of the demographics of the audiences for each magazine described in the Avery et al study (2006): Women's magazines (Better Homes and Gardens, Good Housekeeping, TV Guide, Family Circle, McCalls-Rosies, and Woman's Day), Young

Adults magazines (Vogue, Cosmopolitan, and Glamour), African American magazines (Ebony and Essence), and General Interest magazines (Newsweek, People, Reader's Digest, Sports Illustrated, Time, and U.S. News and World Report).

The brands that were found in these ads include:

TABLE 3

ANTIDEPRESSANT BRAND DATA

BRAND	MANUFACTURER	DATE OF FDA APPROVAL	PATENT LOSS/ TAKEN OFF MARKET	DATE OF 1ST AD APPEARANCE IN DATA SET
CELEXA	Forest Pharmaceuticals	July 1998		September 2001
SERZONE	Bristol-Myers Squibb Company	December 1994	May 2004	December 1997
EFFEXOR, EFFEXOR XR	Wyeth Pharmaceuticals	December 1993, October 1997		November 1995, April 2003
PROZAC	Eli Lilly	December 1987	January 2002	July 1997
PAXIL CR	GlaxoSmithKline	February 1999		September 2002
WELLBUTRIN SR, WELLBUTRIN XL	GlaxoSmithKline	October 1996, August 2003		Fall 1996, October 2003
ZOLOFT	Pfizer	December 1991		May 2001

Prozac was the first antidepressant brand in my study to be approved by the FDA; however its patent was also the first to be lost. Serzone was removed from the market by its manufacturer in May 2004. This was shortly following a black box warning addition to its labeling due to concerns of associated liver failure. Its generic form, nefazodone, however, is still on the market. GlaxoSmithKline is the only manufacturer in my data set

to produce two brands: Paxil CR and the Wellbutrin SR and XL (which will be grouped together for analysis purposes). Wellbutrin XL, which denotes extended release, was the latest brand in my data to be approved by the FDA. Overall, after combining the Effexors and Wellbutrins, there are a total of seven brands included in my data.

a. Instrument Development

A content coding tool was used to record the content of the ads that was developed and tested as part of the funded project effort. This coding form is presented in Appendix 4. The content coding form records: ad length, design of the ad (color/black & white), ad visual (whether it contains a picture, product, text, or chart/quiz/questionnaire), taglines, directives, side effects, product claims, general information about depression, offerings, nature of ad appeal, superiority claims, and whether people are in the ads (race, gender, age, etc).

b. Pre-testing

This coding instrument was pre-tested by several research assistants and the results were compared for consistency. The instrument went through several rounds of testing and revisions until an acceptable level of inter-coder reliability was achieved (89%). All advertisements were then coded using this instrument and rechecked for consistency and accuracy. Inter-coder reliability was an essential part of this process. Ten percent of the coding forms of each magazine were independently double-checked by another research assistant. If there was more than a ten percent error rate between the coders, all advertisements of that magazine were re-coded. Another ten percent sample

was double-checked and the process iterated until error rates of all checked samples were below five percent.

C. Methods

I will be using a twofold strategy in my analysis. First, I will analyze the aspects of the antidepressant advertisements on the unique ad level. Since 1995, there have been 69 unique advertisements for antidepressant medications that have been aimed directly at consumers. By doing so, I can examine the advertisements to determine what messages the manufacturers are attempting to convey to the consumer and how these messages vary by brand/manufacturer. Secondly, I will analyze the antidepressant advertisements using the frequency of ad appearance as my unit of analysis. Many unique ads appeared multiple times across different magazines or on different dates within the same magazine. For each time an ad appeared, I will use analyze its content not by brand but by what magazine the ad appeared in. Through this analysis, I can investigate what messages the consumer is actually receiving through these advertisements.

1. Variable Measurement

Causes of Depression

In order to examine this research question, I will note the frequency with which the following statements are made in the advertisements:

- "When you're clinically depressed the level of serotonin may drop."
- "Depression could be caused by a chemical imbalance."
- "PMDD is related to hormonal changes and chemicals in your body."
- "It can be triggered by stressful life, or it can appear suddenly."
- "Depression is a real illness with real causes."
- "The cause of depression is unknown."

I classified these statements into medical reasons such as biological or chemical factors (statements 1-3), personal reasons (statement 4), and unspecified/unknown causes (statements 5-6).

Self-Diagnosis

In order to examine the question of self-diagnosis, I will note the frequency of how many ads include symptoms of depression and what symptoms are referred to most frequently. I will also observe whether the symptoms are presented in a quiz or checklist format. In addition, I will be noting with what frequency the ads provide a phone number, website, or free information/booklets, as well as whether they state to "ask/notify/see your doctor."

I will use these measures in order to determine to what extent these ads facilitate self-diagnosis. This will be accomplished by investigating the types of symptoms listed as well as exploring whether the ads provide a phone number or website to contact for more information or by offering free information/booklets. Also, I will determine what percentage of the ads that provide symptoms present them in a quiz or checklist format. In addition, I will use these measures to determine how these ads might facilitate the doctor patient relationship by making a recommendation to "ask/notify/see your doctor."

Benefits and Risks

In order to examine how benefits as compared to how risks are conveyed I will first note the frequency with which benefits and risks are listed on the unique ad level then repeat this analysis on the frequency level.

Benefits are product claims and include:

General Health
- Works to correct chemical imbalance

Reproductive Health
- Treats Pre Menstrual Dysphonic Disorder

Psychological Health
- Product helps treat Post Traumatic Stress Syndrome
- Won't change your personality

General Claim
- Low occurrence of side-effects/not usually serious/well tolerated
- Not associated with weight gain
- Not habit forming
- Convenient

Risks are possible side-effects listed in the ads and include:

General Health
- Sweating
- Dizziness/ lightheadedness
- Headaches
- Rash
- Seizure/tremor
- Lack of energy/ weakness
- Injury/ trauma
- Vision impairment
- Infection

Gastrointestinal
- Diarrhea, constipation, upset stomach
- Nausea
- Dry mouth
- Sore throat

Sleep Related
- Insomnia
- Drowsiness/ sleepiness/ yawn

Sexual Side Effects
- Sexual impairment

Psychological
- Anxiety/ nervousness/ agitation
- Suicidal thoughts/ action
- Decreased appetite

Weight Effects
- Weight changes/anorexia

Cardiovascular
- Increased blood pressure

I will use these measures in order to determine to what extent these ads lead to informed decision making by the consumer. I will examine the percentage of the advertisements containing benefits of the drug and the percentage of the advertisements containing side-effects of the drug. Specifically, I would like to discover how many advertisements minimize the risks by stating that side-effects have a low occurrence, that they are not usually serious or are well tolerated. I will compare the frequency and framing of benefits and risks between brands in my unique ad analysis. I will examine whether the method of presenting benefits and risks of antidepressant medication vary by magazine readership on the frequency level.

Type of appeal used in the advertisement:

In order to examine the type of appeal utilized in the advertisements, I will examine a number of different features of ad appeal. The first thing I will examine is the overall nature of the appeal. The ads will be coded using only one of the following types of appeals representing the major or primary appeal used in the ad:

- **Anecdotal/testimonial**- An anecdotal ad appeal is based on a specific person's experience/story with the medication or illness. These will have ads based on people's subjective experiences with the product or condition. An example is:

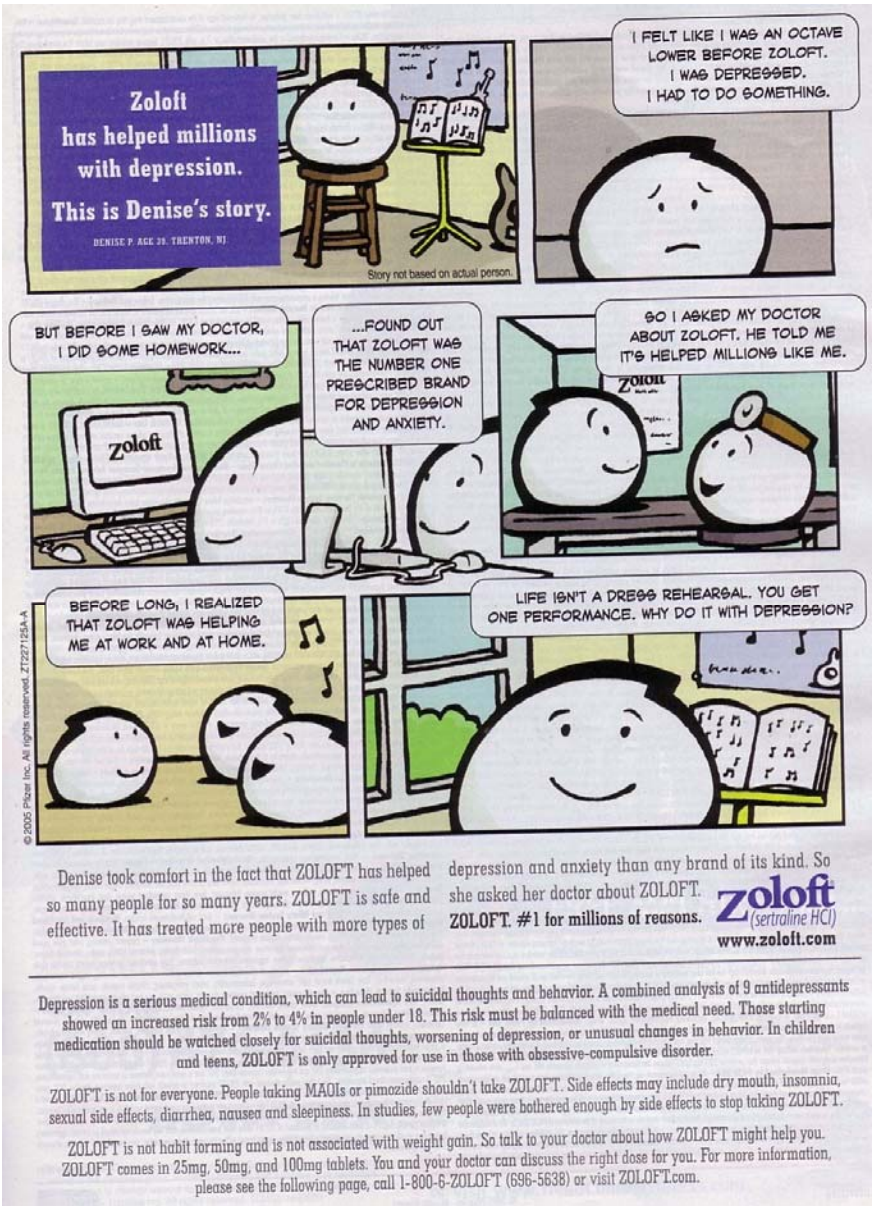


FIGURE 3

EXAMPLE OF ANECDOTAL/TESTIMORNIAL AD:

Zoloft Ad (Better Homes and Gardens, May 1995)

- **Motivational-** A motivational ad appeal has a "you can do it" attitude. It tries to pick you up and get you normal again by reaching out to the consumer and making them

feel like there is a solution to the condition. An example of such is the Prozac ad below.

FIGURE 4

EXAMPLE OF MOTIVATIONAL AD:

Prozac ad (Ebony, August 1997)

- **Promotional-** a promotional ad appeal's focus is to promote the product through special offers, coupons, guarantees, promotions, etc. Ads that preview a pharmaceutical that is soon to hit the market are always considered promotional. An example is:

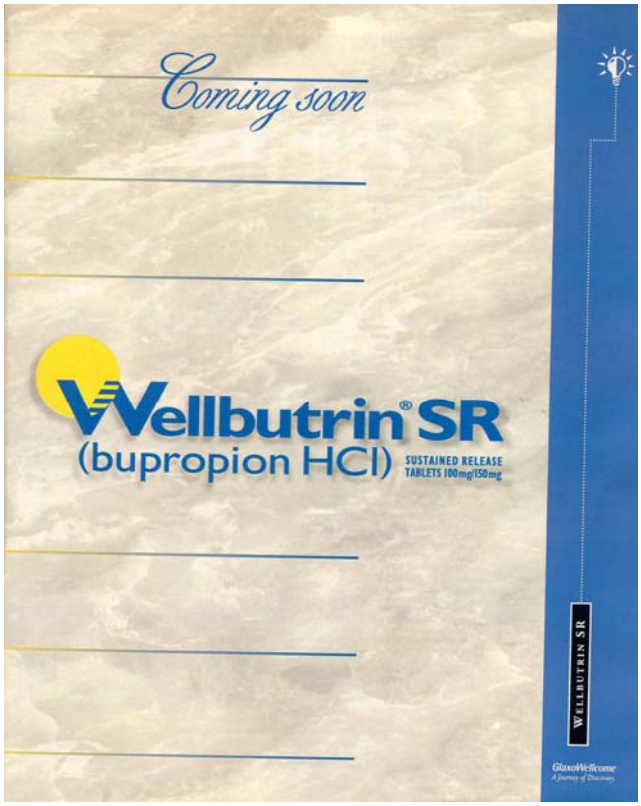


FIGURE 5

EXAMPLE OF PROMOTIONAL AD:

Wellbutrin ad (Time, Fall 1996)

- **Emotional-** an emotional ad appeal attempts to grab the consumer's attention by trying to tap into the reader's feelings and sentiments. These ads do so by expressing either fears or anxieties the reader might be experiencing as well as the emotions they could feel after taking this medication. An example of such is shown below.

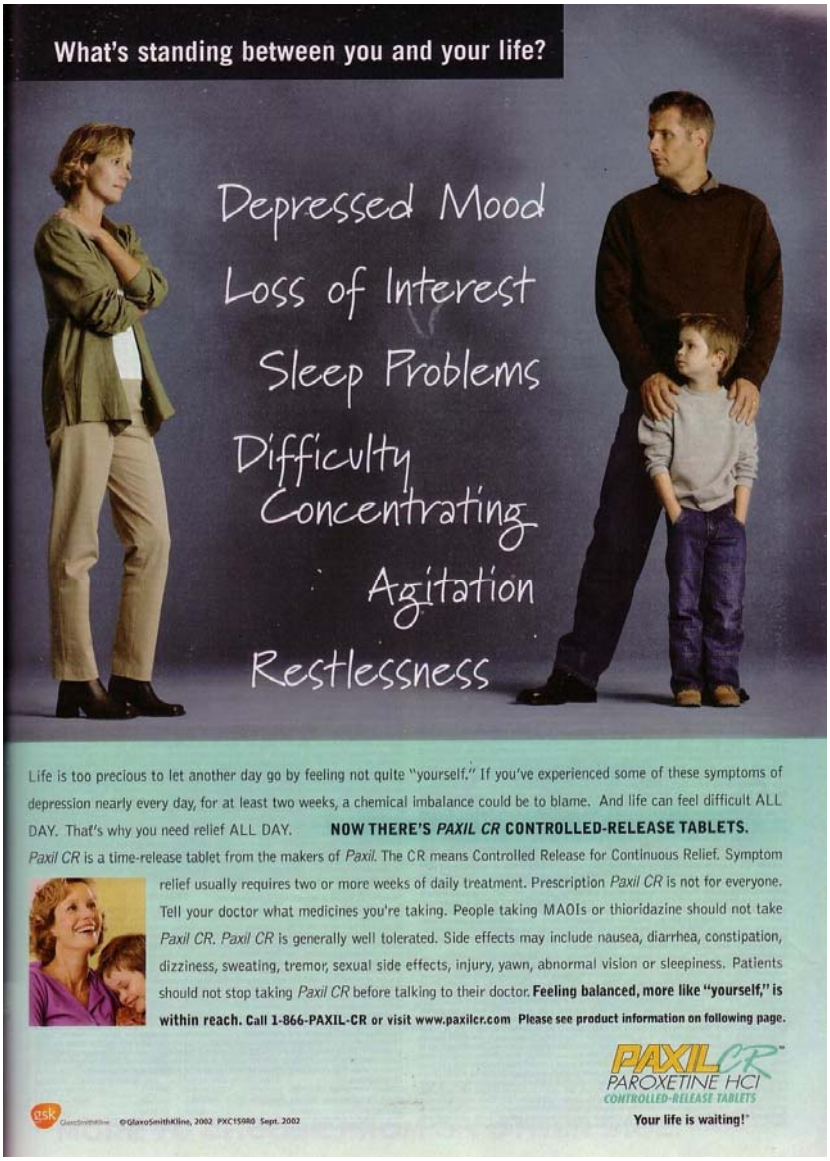


FIGURE 6

EXAMPLE OF AN EMOTIONAL AD:

Paxil CR ad (Cosmopolitan, February 1993)

- **Popular appeal**- A popular ad appeal makes you feel like you're not alone and that many other people suffer from the same symptoms as you and take medication for it. An example of a popular appeal is shown below.

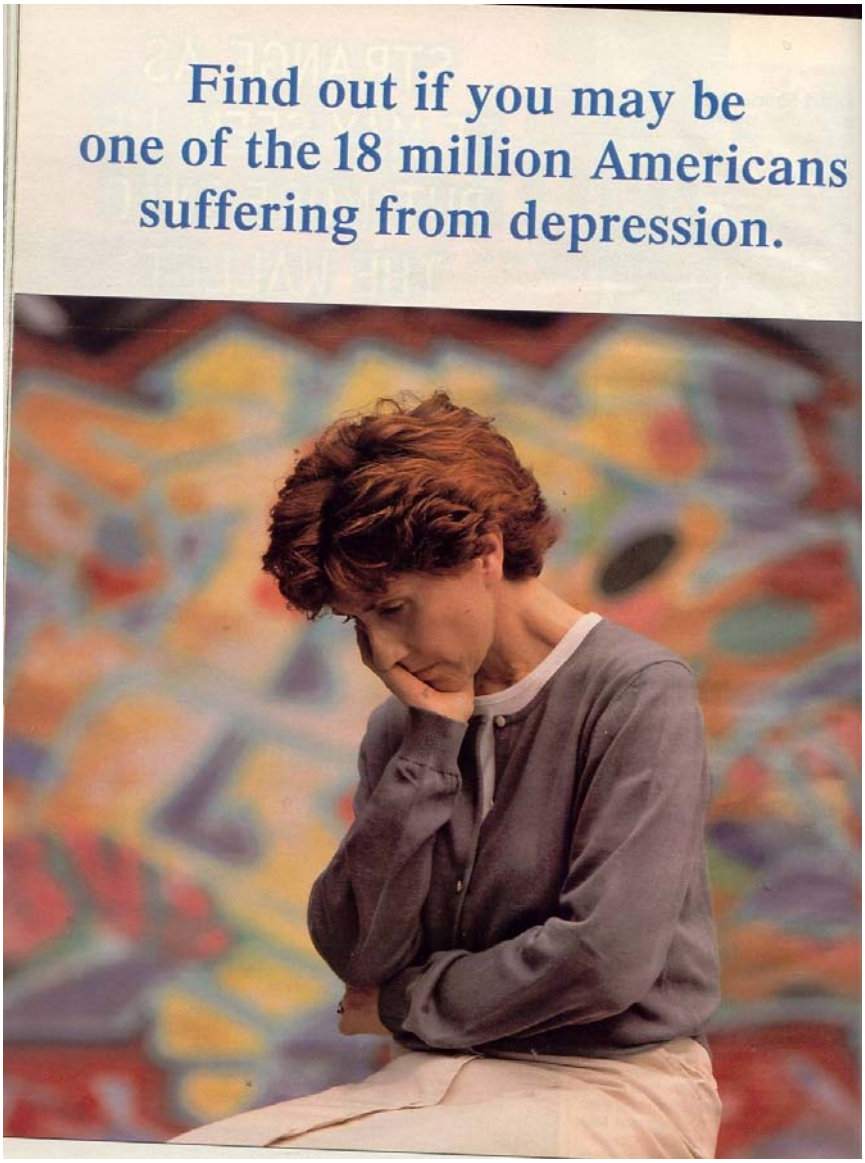


FIGURE 7

EXAMPLE OF POPULAR AD:

Effexor ad (Time, December 4th, 1995)

- **Safety**- A safety ad appeal emphasizes how safe/low risk of side effects the medication is. This is only part of the ad appeal if the advertisement makes a point to highlight the safety of the product. An example of a safety ad is:

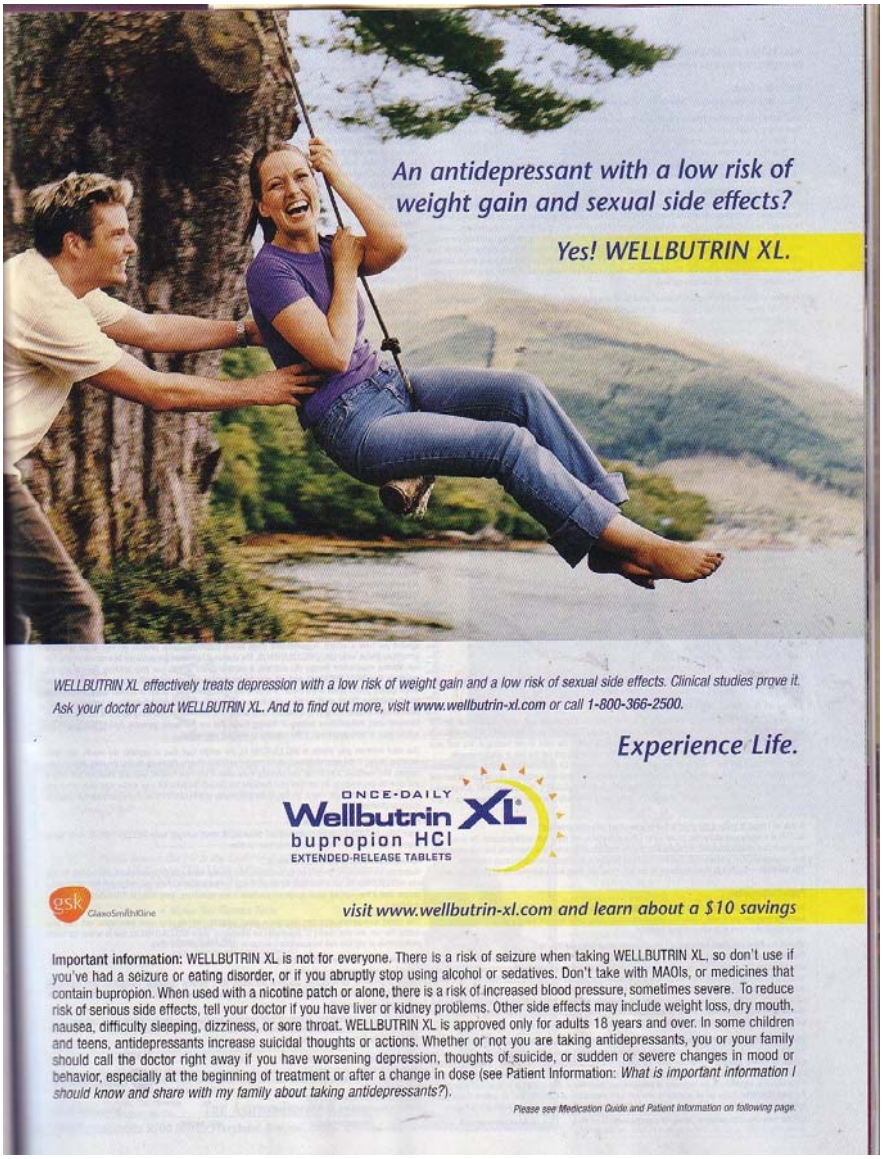


FIGURE 8

EXAMPLE OF A SAFETY AD:

Wellbutrin XL ad (Family Circle, August 8th, 2005)

- **Informative**- An ad appeal that is informative gives empirical evidence of the medicine's effectiveness or depicts the biochemical information behind the disease/medication. An example of this type of ad appeal is shown below.

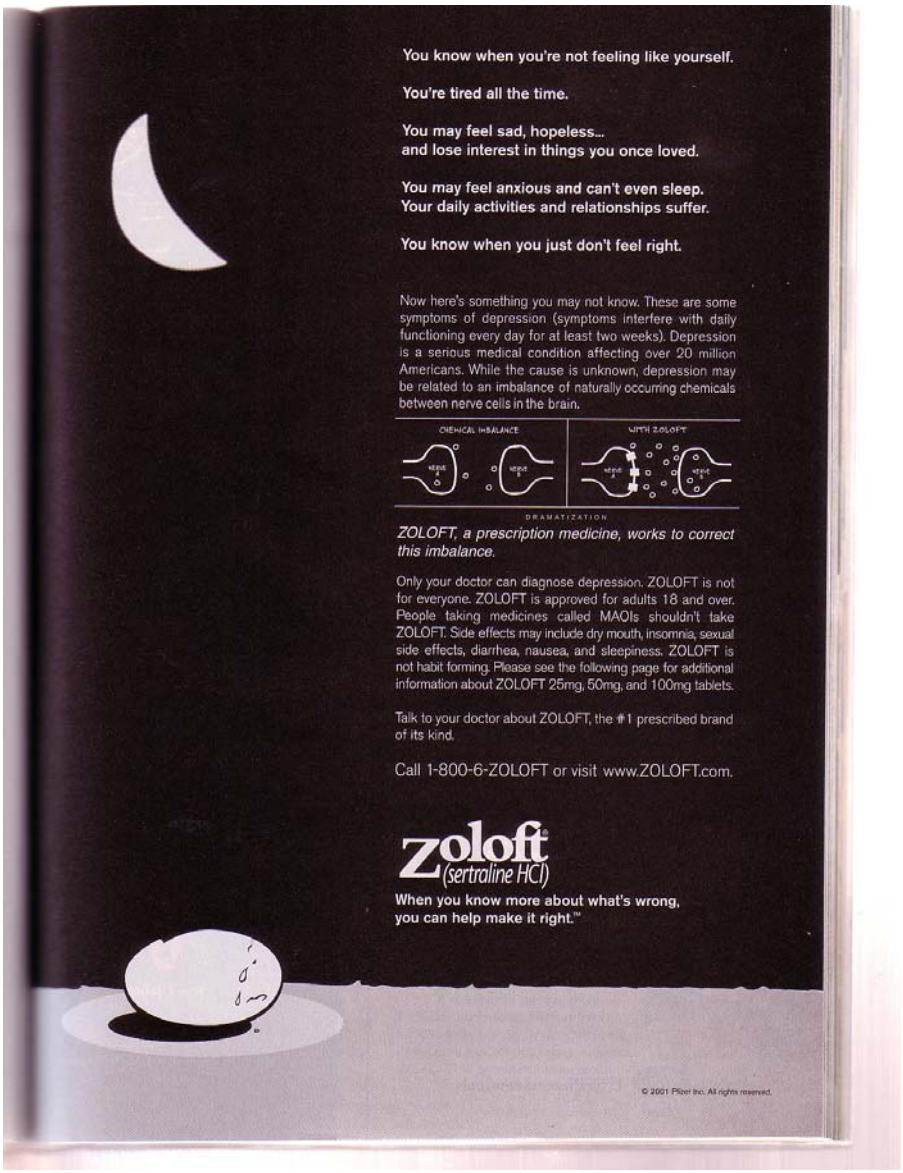


FIGURE 9

EXAMPLE OF INFORMATIVE AD:

Zoloft ad (Marie Claire, August 2001)

The next dimension of appeal I am measuring is specific targeting techniques. First is the use of people in the advertisements. I will determine how many of the ads include pictures of people and how many people there are in each ad. I will examine the gender, age groups and races of people appearing in the ads. The last dimension of ad

appeal I am examining is the use of subtle messaging techniques. I will measure the frequency of people that have a sad or stern demeanor, a happy or smiling demeanor, or have no particular expression. I will also be measuring the frequency of how people are socially depicted: whether they are alone or with other people and if the latter, if this in a family, romance, work, or recreational setting. I will further investigate these subtle messages when they are used in before/after picture techniques. I will use these measures in order to describe the type of appeal mainly used in these ads and specifically within the three dimensions described above.

V. RESEARCH RESULTS AND ANALYSIS

A. Reporting of Results

1. Analysis of Results at the Unique Ad Level

There are 69 unique antidepressant advertisements in my data set. Of these 69 advertisements, the frequency of each brand is as follows:

TABLE 4

BRAND FREQUENCY AT THE UNIQUE AD LEVEL

BRAND	MANUFACTURER	N	PERCENT
CELEXA	Forest Pharmaceuticals	1	1.45%
SERZONE	Bristol-Myers Squibb Company	1	1.45%
EFFEXOR & EFFEXOR XR	Wyeth Pharmaceuticals	18	26.09%
PROZAC	Eli Lilly	15	21.74%
PAXIL CR	GlaxoSmithKline	3	4.35%
WELLBUTRIN (SR & XL)	GlaxoSmithKline	8	11.60%
ZOLOFT	Pfizer	23	33.33%
TOTAL		**69**	**100%**

The brands that make up the majority of the unique advertisements are Zoloft (33.33%), Effexor and Effexor XR (26.09%), Prozac (21.74%), and the Wellbutrins

(11.60%). Pfizer put out the most unique advertisements for its brand of antidepressant: Zoloft. This brand makes up approximately 1/3 of all the unique advertisements. GlaxoSmithKline manufactures different brands of antidepressant medication; Paxil CR, Wellbutrin SR and XL are included in this data set. Collectively, GlaxoSmithKline contributed to 15.95% of all the unique antidepressant advertisements, with the most being for the Wellbutrins. Both Serzone and Celexa had one unique advertisement each. Effexor and Effexor XR (manufactured by Wyeth Pharmaceuticals) and Prozac (manufactured by Eli Lilly) constitute approximately half of all the unique antidepressant advertisements.

Causes of Depression

In order to examine this research question, I noted with what frequency the following statements are made in the advertisements. Multiple causes may be stated in a single advertisement, so the total number of causes for each brand can exceed the number of unique advertisements for that particular brand.

TABLE 5: CAUSES OF DEPRESSION BY BRAND

	Celexa N = 1	Serzone N = 1	Effexor (XR) N = 18	Prozac N = 15	Paxil CR N = 3	Wellbutrin SR & XL N = 8	Zoloft N = 23	Total
Biochemical/Medical Causes								
"When you're clinically depressed the level of serotonin may drop."	0	0	0	9	0	0	0	**9**
"Depression could be caused by a chemical imbalance."	0	0	16	6	2	0	8	**32**
"PMDD is related to hormonal changes and chemicals in your body."	0	0	0	0	0	0	4	**4**
Personal Causes								
"It can be triggered by stressful life, or it can appear suddenly."	0	0	0	13	0	0	0	**13**
Causes are Unspecified/Unknown								
"Depression is a real illness with real causes."	0	0	2	15	0	0	0	**17**
"The cause of depression is unknown."	0	0	0	0	0	0	15	**15**
TOTAL	**0**	**0**	**18**	**43**	**2**	**0**	**27**	

** multiple causes may be identified in a single advertisement, therefore numbers within each column do not add up to total # of ads

In both Serzone's and Celexa's singular unique advertisements, none of these causes are listed. Wyeth Pharmaceuticals manufactures Effexor and Effexor XR, which constitute 18 unique advertisements. Wyeth references biochemical/medical causes in nearly every one of their advertisements. Within Effexor's three unique ads, one states that depression could be caused by a chemical imbalance and two claim that depression is a real illness with real causes. Within Effexor XR's fifteen unique ads, all of them mention that this medication "works on both serotonin and norepinephrine- two chemicals in the brain linked to depression." Therefore, both types of Effexor specifically state that depression is caused by a chemical imbalance or alludes to that fact. However, Effexor makes no mention of personal causes for depression.

Prozac and Zoloft also mention biochemical/medical causes for depression. Advertisements for Eli Lilly's antidepressant, Prozac, make several statements regarding the causes of depression in their advertisements. Every Prozac ad states that "Depression is a real illness with real causes." Prozac further substantiates this claim by providing biochemical/ medical causes for depression. A portion of the unique ads make the general statement that depression could be caused by a chemical imbalance and some specifically mention a neurotransmitter might cause depression by stating that "When you're clinically depressed the level of serotonin may drop." However, Prozac does not only infer that depression is caused by medical reasons such as biological or chemical factors. 86.67% of the Prozac ads also mention that the causes of depression are not solely medical and can be triggered by stressful life, or it can appear suddenly. Prozac is the only brand that mentions possible personal causes for depression.

Zoloft, with the greatest number of unique ads, also makes multiple statements within its ads about the causes of depression. Like many other brands, Zoloft ads state that depression could be caused by a chemical imbalance. Furthermore, Zoloft actually depicts this imbalance through the use of drawings which demonstrate the relevant neurotransmitters and the chemical imbalance. Please refer to Figure 9 for an example. Zoloft also states in other unique ads a biochemical/medical cause that no other brand does; it claims that "PMDD is related to hormonal changes and chemicals in your body." Zoloft is not the only brand that is prescribed for such a condition; Paxil, Prozac, and Celexa are as well. However, Zoloft is the only brand that specifically advertises its use in treating such a condition. Though Zoloft infers that both depression and PMDD can be caused by a chemical or hormonal imbalance, 65.22% of the ads also state that the cause of depression is unknown. No other brand does this. Also, it is important to note that Zoloft does not mention any personal causes.

GlaxoSmithKline's has two different brands of antidepressants- yet Paxil is the only one to discuss the causes of depression. 66.66% of Paxil CR's three unique ads also claim that depression could be caused by a chemical imbalance but make no other statements regarding causes of depression. Wellbutrin SR's two unique ads and Wellbutrin XL's six unique ads, similarly to Celexa and Serzone, contain nothing in their ads regarding the causes of depression.

Overall, a biochemical/medical cause is claimed in 36 of the 69 unique advertisements. Personal causes are claimed in 13 of the 69 unique ads. The claim that depression is a real illness with real causes is claimed in 17 out of 69 ads and claiming

that the cause is unknown is made in 15 of the 69 unique ads. Therefore, the most widespread claim regarding causes is of a biochemical/medical nature.

2. Self-Diagnosis

In order to examine the question of self-diagnosis, I noted the symptoms of depression and how many of the 69 ads these symptoms appear in.

TABLE 6: SYMPTOMS OF DEPRESSION BY BRAND

	Celexa N = 1	Serzone N = 1	Effexor (XR) N = 18	Prozac N = 15	Paxil CR N = 3	Wellbutrin SR & XL N = 8	Zoloft N = 23	Total
SEVERELY PSYCHOLOGICAL								
Everyday life unbearable	0	0	0	15	0	0	12	**27**
Thoughts of Death/ Suicide	0	0	3	0	0	1	0	**4**
PSYCHOLOGICAL								
Inability to Concentrate	1	0	0	14	2	0	0	**17**
Loss of Interest	0	0	18	0	2	1	11	**32**
High Stress/ Anxiety	0	1	0	0	1	0	10	**12**
PHYSICAL ACTIVITY CHANGE								
Change in Sleep Patterns	1	1	3	15	2	0	9	**31**
Change in appetite	1	0	3	15	0	0	0	**19**
Fatigue/Low energy	0	1	18	15	0	0	13	**47**
DEPRESSIVE SYMPTOMS								
Depression/ Sadness	0	1	15	15	1	1	14	**47**
Sadness lasts weeks	0	1	3	0	0	0	1	**5**
OTHER								
Agitation/ irritability	1	0	0	15	2	0	5	**23**
Restlessness	0	0	0	0	2	0	0	**2**
TOTAL	**4**	**5**	**53**	**104**	**12**	**3**	**75**	

** multiple symptoms may be identified in a single advertisement, therefore numbers within each column do not add up to total # of ads

The symptoms that appear most frequently in unique antidepressant advertisements are depression/sadness (47 times), fatigue/low energy (47 times), loss of interest (32 times), and change in sleep patterns (31 times). Certain brands tend to list some symptoms of depression over other ones. The one Celexa unique ad mentioned the symptoms: change in sleep patterns, inability to concentrate, change in appetite, and agitation/irritability. Effexor mentions loss of interest and fatigue/low energy in all of its 18 unique advertisements. In only three unique ads does this brand mention change in sleep patterns, change in appetite, thoughts of death/suicide, or sadness that lasts weeks. In all but three ads, depression/sadness is listed as a symptom of depression. Paxil has three unique ads. Many symptoms appear in any combination of two of these ads: inability to concentrate, loss of interest, change in sleep patterns, agitation/irritability, and restlessness. Two other symptoms only appear in one of the unique Paxil CR ads: depression/sadness and high stress/anxiety.

Prozac has 15 unique ads and lists certain symptoms in every one of their unique ads. These include: everyday life unbearable, change in sleep patterns, change in appetite, fatigue/low energy, depression/sadness and agitation/irritability. Inability to concentrate is also listed as a symptom in all Prozac unique ads but one. Serzone's one unique ad lists the following symptoms: change in sleep patterns, fatigue/low energy, depression/sadness, sadness that lasts weeks, and high stress/anxiety. It also includes the "other" symptom of a feeling of hopelessness. Wellbutrin SR's two unique ads list no symptoms of depression whatsoever. Wellbutrin XL utilizes three symptoms and each symptom only appears in one unique ad. These include loss of interest, thoughts of death/suicide, and depression/sadness. Symptoms are included in all of Zoloft's 23

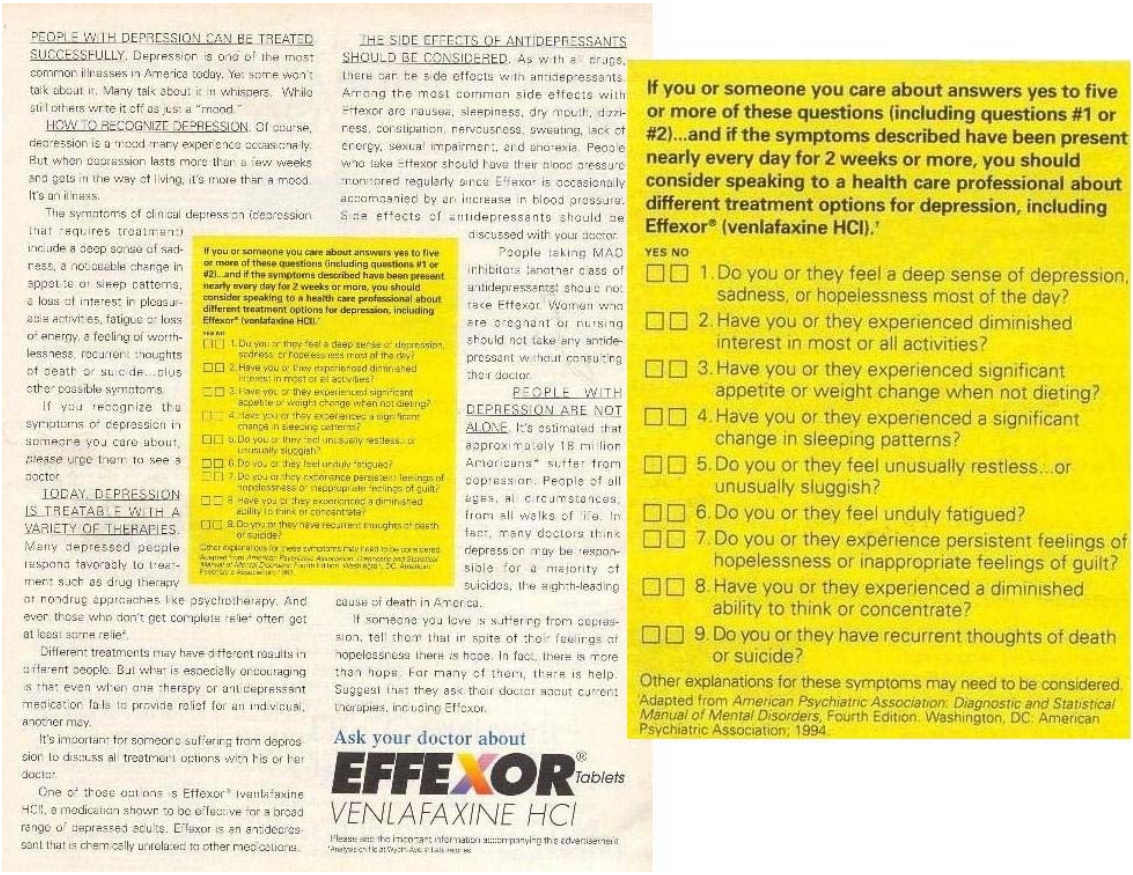
unique advertisements. They are listed with varying combinations but include: everyday life unbearable, loss of interest, change in sleep patterns, fatigue/low energy, depression/sadness, sadness that lasts weeks, high stress/anxiety, and agitation/ irritability.

Overall, Prozac claims the greatest number of symptoms in their unique advertisements (104) followed by Zoloft (75) and Effexor (53). The types of symptoms mentioned most often are physical activity changes (97 times), physiological symptoms (61 times), followed by depressive symptoms (52 times).

I also observed whether the symptoms are presented in a quiz or checklist format. The use of this method within these advertisements could contribute toward self-diagnosis and an overall increase in prescribing rates. Therefore it is important to see to what extent these ads are including such items that might inappropriately increase patient demand for antidepressants and negatively affect the physician-patient relationship.

Results indicate that Zoloft and Effexor (XR) are the only brands that utilize this method. However, though only two brands are doing so, Zoloft and Effexor make up 59.42% of the antidepressant unique advertisements. Seven of the 23 unique Zoloft ads (30.43%) include a quiz. Fifteen of the 18 unique Effexor (XR) ads (83.33%) include a quiz and three include a checklist like the one shown below. By doing so, these ads are encouraging the reader to compare certain aspects of their lives to the symptoms of depression. The reader needs only to check off a certain number of boxes or answers "yes" to enough questions in order to self-diagnosis themselves with depression. The ad below states that "if you answer yes to five or more of these questions then you should consider speaking to health care professional about the different treatment options for

depression." They direct the reader to discuss treatment options without even questioning the issue of diagnosis. An example of an Effexor ad which utilizes this checklist approach is shown below.



PEOPLE WITH DEPRESSION CAN BE TREATED SUCCESSFULLY. Depression is one of the most common illnesses in America today. Yet some won't talk about it. Many talk about it in whispers. While still others write it off as just a "mood."

HOW TO RECOGNIZE DEPRESSION. Of course, depression is a mood many experience occasionally. But when depression lasts more than a few weeks and gets in the way of living, it's more than a mood. It's an illness.

The symptoms of clinical depression (depression that requires treatment) include a deep sense of sadness, a noticeable change in appetite or sleep patterns, a loss of interest in pleasurable activities, fatigue or loss of energy, a feeling of worthlessness, recurrent thoughts of death or suicide...plus other possible symptoms.

If you recognize the symptoms of depression in someone you care about, *please* urge them to see a doctor.

TODAY, DEPRESSION IS TREATABLE WITH A VARIETY OF THERAPIES. Many depressed people respond favorably to treatment such as drug therapy or nondrug approaches like psychotherapy. And even those who don't get complete relief often get at least some relief.

Different treatments may have different results in different people. But what is especially encouraging is that even when one therapy or antidepressant medication fails to provide relief for an individual, another may.

It's important for someone suffering from depression to discuss all treatment options with his or her doctor.

One of those options is Effexor® (venlafaxine HCl), a medication shown to be effective for a broad range of depressed adults. Effexor is an antidepressant that is chemically unrelated to other medications.

THE SIDE EFFECTS OF ANTIDEPRESSANTS SHOULD BE CONSIDERED. As with all drugs, there can be side effects with antidepressants. Among the most common side effects with Effexor are nausea, sleepiness, dry mouth, dizziness, constipation, nervousness, sweating, lack of energy, sexual impairment, and anorexia. People who take Effexor should have their blood pressure monitored regularly since Effexor is occasionally accompanied by an increase in blood pressure. Side effects of antidepressants should be discussed with your doctor.

People taking MAO inhibitors (another class of antidepressants) should not take Effexor. Women who are pregnant or nursing should not take any antidepressant without consulting their doctor.

PEOPLE WITH DEPRESSION ARE NOT ALONE. It's estimated that approximately 18 million Americans* suffer from depression. People of all ages, all circumstances, from all walks of life. In fact, many doctors think depression may be responsible for a majority of suicides, the eighth-leading cause of death in America.

If someone you love is suffering from depression, tell them that in spite of their feelings of hopelessness there is hope. In fact, there is more than hope. For many of them, there is help. Suggest that they ask their doctor about current therapies, including Effexor.

Ask your doctor about

EFFEXOR® Tablets

VENLAFAXINE HCl

Please see the important information accompanying this advertisement.

If you or someone you care about answers yes to five or more of these questions (including questions #1 or #2)...and if the symptoms described have been present nearly every day for 2 weeks or more, you should consider speaking to a health care professional about different treatment options for depression, including Effexor® (venlafaxine HCl).†

YES NO

- ☐☐ 1. Do you or they feel a deep sense of depression, sadness, or hopelessness most of the day?
- ☐☐ 2. Have you or they experienced diminished interest in most or all activities?
- ☐☐ 3. Have you or they experienced significant appetite or weight change when not dieting?
- ☐☐ 4. Have you or they experienced a significant change in sleeping patterns?
- ☐☐ 5. Do you or they feel unusually restless...or unusually sluggish?
- ☐☐ 6. Do you or they feel unduly fatigued?
- ☐☐ 7. Do you or they experience persistent feelings of hopelessness or inappropriate feelings of guilt?
- ☐☐ 8. Have you or they experienced a diminished ability to think or concentrate?
- ☐☐ 9. Do you or they have recurrent thoughts of death or suicide?

Other explanations for these symptoms may need to be considered.

Adapted from *American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition. Washington, DC: American Psychiatric Association; 1994.

FIGURE 10
EXAMPLE OF A SYMPTOM CHECKLIST:
Effexor ad (Time, December 4th, 1995)

A total of 22 of the 69 unique advertisements utilize this approach (31.88%). Therefore, on the unique ad level, though only two brands do this, this method appears with substantial frequency.

In addition, I noted with what frequency the ads provide a phone number or website (required after 1997), or free information/booklets, as well as whether they state to "ask/notify/see your doctor." By offering the reader a way to contact the manufacturer

(through a phone number or website) or to provide the reader with more information upon request could possibly facilitate self-diagnosis. On the other hand, to state that the reader should "ask/notify/ see your doctor" would promote meeting with a doctor first. The overall frequencies of unique ads in which these things appear are:

TABLE 7: ASPECTS OF SELF-DIAGNOSIS BY BRAND

	Celexa N = 1	**Serzone N = 1**	**Effexor (XR) N = 18**	**Prozac N = 15**	**Paxil CR N =3**	**Wellbutrin SR & XL N = 8**	**Zoloft N =23**	**Total**
Phone number	1	1	15	2	3	7	23	**52**
Website	1	0	15	8	3	7	23	**57**
Free info/ booklet	0	1	0	2	0	0	4	**7**
Ask/notify/ see your doctor	1	1	18	15	3	7	23	**68**
TOTAL	**3**	**3**	**48**	**27**	**9**	**21**	**73**	

Every brand offers additional information through the use of a phone number, website, or both in at least some of their unique advertisements. In every single ad but one, there is also a suggestion to ask, notify, or see your doctor. The one exception is one unique ad by Wellbutrin SR. This can be explained by the fact that one Wellbutrin SR unique ad is a promotional ad that simply says that Wellbutrin SR is coming soon (see Figure 5). This is considered a "teaser" ad. However, the other Wellbutrin SR ad contains both a phone number and website. Prozac and Zoloft are the only brands that offer free information or a booklet. Zoloft even offers to send the reader a free starter kit as shown in the example below.

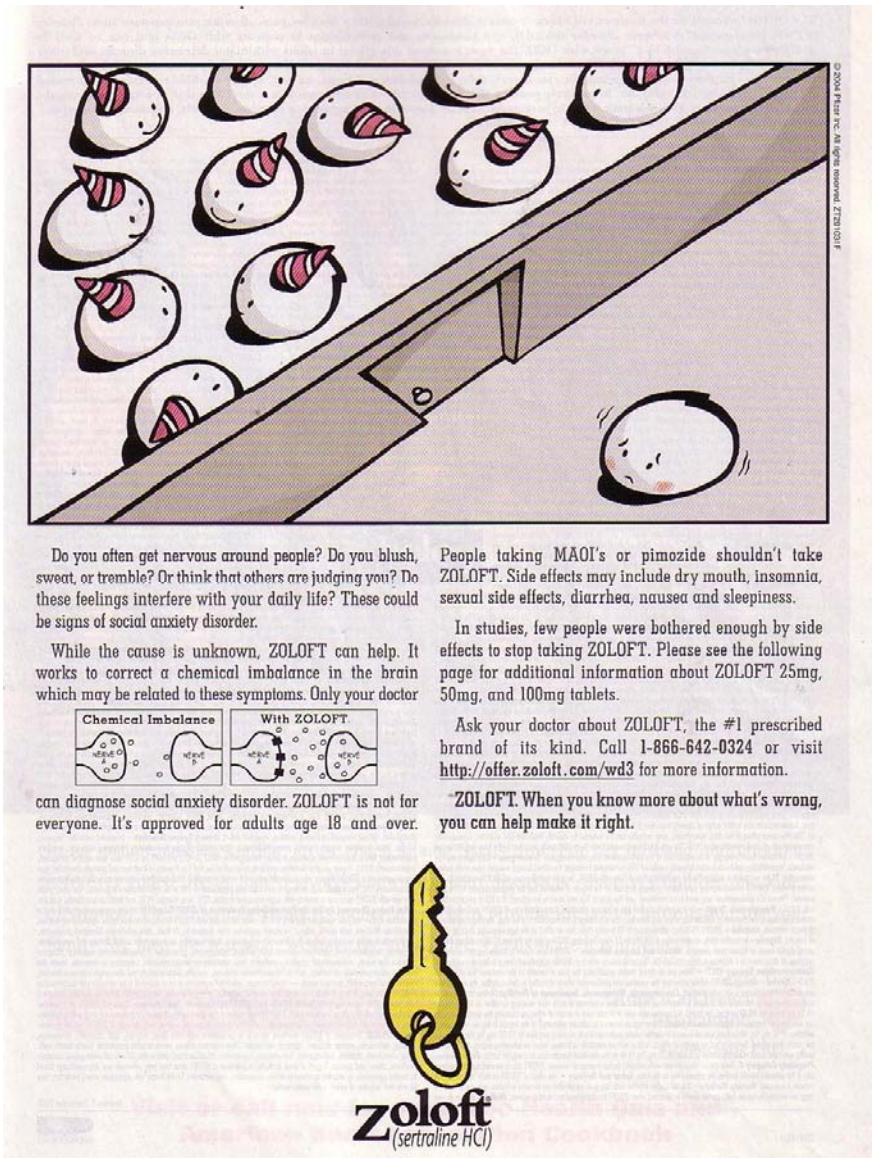


FIGURE 11

EXAMPLE OF AD OFFERING FREE INFORMATION: Zoloft ad (Woman's Day, October 5th, 2004)

3. Benefits and Risks

In order to examine how benefits as compared to how risks are conveyed I first noted the frequency with which benefits are listed in the unique ads. The benefits appeared with the following frequencies in the unique advertisements:

TABLE 8: BENEFITS OF MEDICATION BY BRAND

	Celexa N = 1	Serzone N = 1	Effexor (XR) N = 18	Prozac N = 15	Paxil CR N = 3	Wellbutrin SR & XL N = 8	Zoloft N = 23	Total
General Health								
Works to correct chemical imbalance	0	0	15	0	0	0	15	**30**
Reproductive Health								
Treats Pre Menstrual Dysphonic Disorder	0	0	0	0	0	0	4	**4**
Psychological Health								
Product helps treat Post Traumatic Stress Syndrome	0	0	0	0	0	0	2	**2**
Won't change your personality	0	1	0	14	0	0	0	**15**
General Claim								
Low occurrence of side-effects/ not usually serious/ well tolerated	0	1	0	15	3	1	15	**35**
Not habit forming	0	1	0	2	0	0	14	**17**
Not associated with weight gain	0	0	0	0	0	1	4	**5**
Convenient	0	0	0	0	0	5	0	**5**
TOTAL	**0**	**3**	**15**	**31**	**3**	**7**	**64**	

** multiple benefits may be identified in a single advertisement, therefore numbers within each column do not add up to total # of ads

The various brands of antidepressants claim differing benefits. This is most likely due to the diverse pharmacology in each medication. Both Celexa and Wellbutrin SR claim none of these benefits in their unique ads. Zoloft is the brand that claims the most benefits throughout its 23 unique advertisements. 65.22% of the unique ads for Zoloft make the general health claim that their medication works to correct a chemical imbalance. Effexor (XR) is the only other brand to make this claim (and claims no other benefit); it does so in 83.33% of its 18 unique advertisements. Zoloft also claims the benefit that there is a low occurrence of side-effects, that they are not usually serious or that they are well tolerated in a substantial amount of their unique ads: 65.22%. Zoloft is also the only brand to make a benefit regarding reproductive health that it treats Pre Menstrual Dysphonic Disorder; it does so in 17.39% of their unique ads. In fact, these unique Zoloft ads that make this claim utilize the benefit as the focus of their advertisement. One example is shown below.

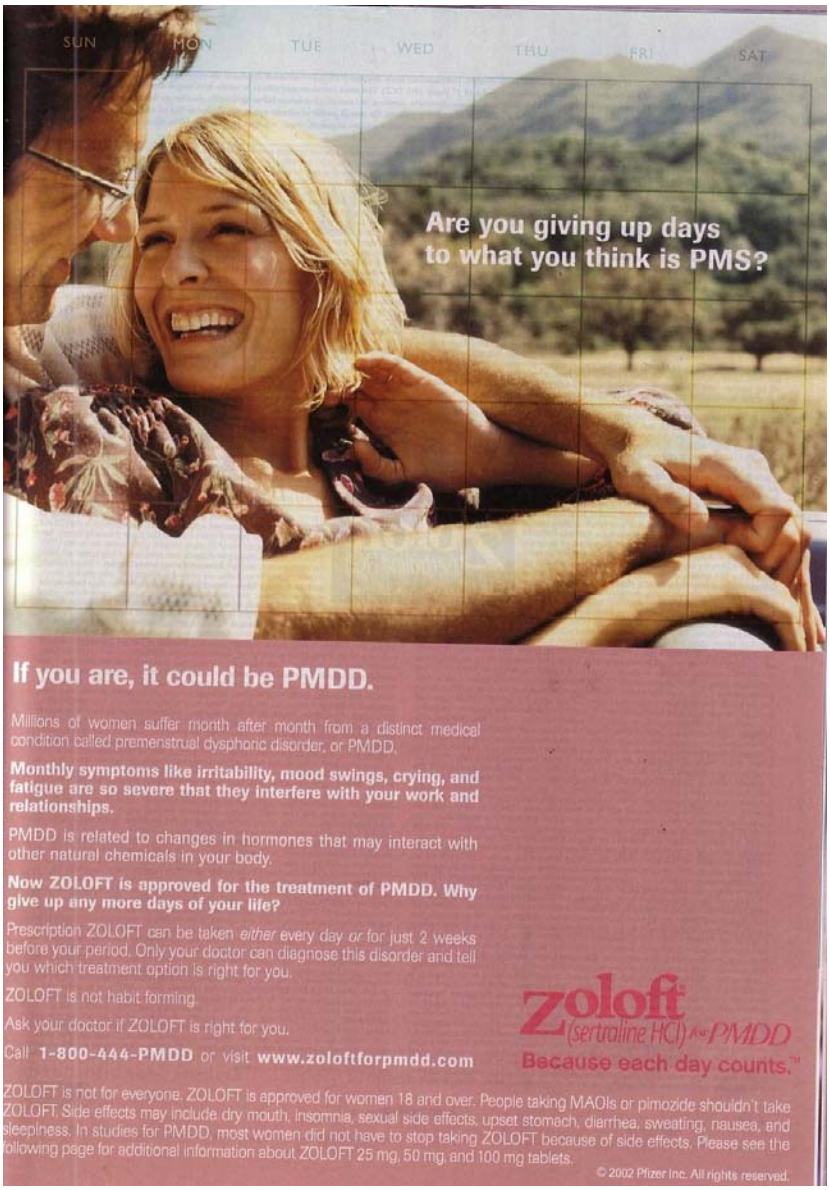


FIGURE 12
EXAMPLE OF AD CLAIMING REPRODUCTIVE HEALTH BENEFIT:
Zoloft ad (Better Homes and Gardens, February 2003)

In addition, Zoloft is the only brand to claim that it treats Post Traumatic Stress Syndrome and does so in 8.70% of its unique ads. The other psychological health claim, that the medication will not change one's personality, is a benefit only mentioned by Serzone (in 100% of its unique ads) and Prozac (in 93.33% of its unique ads). In fact, in Serzone's one unique ad and Prozac's fifteen unique ads, they make the same three

claims with differing frequencies. They both mention the benefit that there is a low occurrence of side-effects, that they are not usually serious or are well-tolerated; Prozac does so in 100% of its unique ads. In addition, they both claim that their medication isn't habit forming. Prozac only does so in a small percentage of their unique ads, 13.33%. Wellbutrin XL is the only brand that claims its medication is "convenient" in 100% of its unique ads. In addition, Wellbutrin XL claims once that there is a low occurrence of side-effects, that they are not usually serious or are well tolerated and in one other unique ad claims that the medication is not associated with weight gain.

Overall, Zoloft and Prozac claim the most benefits over any other brand. The benefits most frequently stated are that there is a low occurrence of side-effects, that they are not usually serious or that they are well tolerated (35 times). The other frequently stated benefit is the general health claim that the medicine works to correct a chemical imbalance (30 times). Zoloft is the only brand to make any benefits regarding Pre Menstrual Dysphonic Disorder or Post Traumatic Stress Syndrome, though Zoloft is not the only antidepressant prescribed to treat such conditions.

In order to examine how benefits as compared to how risks are conveyed I then noted the frequency with which risks are listed in the ads. The risks appeared with the following frequencies:

TABLE 9: RISKS OF MEDICATION BY BRAND

	Celexa N = 1	Serzone N = 1	Effexor (XR) N = 18	Prozac N = 15	Paxil CR N = 3	Wellbutrin SR & XL N = 8	Zoloft N = 23	Total
General Health								
Sweating	1	0	18	0	3	0	4	**26**
Dizziness/ lightheadedness	0	1	18	0	3	3	0	**25**
Headaches	0	0	0	15	1	0	0	**16**
Rash	0	0	0	15	0	0	0	**15**
Seizure/tremor	1	0	0	0	2	7	0	**10**
Lack of energy/ weakness	0	1	3	0	2	0	0	**6**
Injury/ trauma	0	0	0	0	2	0	0	**2**
Vision impairment	0	0	0	0	2	0	0	**2**
Infection	0	0	0	0	2	0	0	**2**
Gastrointestinal								
Diarrhea, constipation, upset stomach	1	1	18	15	3	6	23	**61**
Nausea	1	1	18	0	3	1	23	**53**
Dry mouth	1	1	18	0	2	7	23	**52**
Sore throat	0	0	0	0	0	3	0	**3**
Sleep Related								
Insomnia	1	0	15	15	2	7	23	**63**
Drowsiness/ sleepiness/ yawn	1	1	18	15	3	0	23	**61**
Sexual Side Effects								
Sexual impairment	1	0	17	0	3	0	22	**43**
Psychological								
Anxiety/ nervousness/ agitation	0	0	18	14	2	0	0	**34**
Suicidal thoughts/ action	0	0	0	0	0	2	4	**6**
Decreased appetite	0	0	0	0	2	0	0	**2**
Weight Effects								
Weight changes/ anorexia	0	0	18	0	0	6	0	**24**
Cardiovascular								
Increased blood pressure	0	0	18	0	0	7	0	**25**
TOTAL	**8**	**6**	**197**	**89**	**37**	**49**	**145**	

** multiple risks may be identified in a single advertisement, therefore numbers within each column do not add up total # of ads

The different risks are mentioned with varying frequencies within each brand. Again, it is important to note that this is probably due to their varying pharmacology. In Celexa's one unique advertisement, the risks mentioned are sweating, seizure/ tremor, diarrhea/ constipation/ upset stomach, nausea, dry mouth, all sleep related side effects, and sexual impairment. In Serzone's one unique ad the same gastriointestinal risks as Celexa are mentioned but also states that the medication may cause dizziness/lightheadedness, lack of energy/weakness, as well as drowsiness/ sleepiness/ yawn. Effexor (XR) mentions more risks in their unique ads than any other brand. In 100% of their unique advertisements, they mention the risks of sweating, dizziness/ lightheadedness, diarrhea/ constipation/ upset stomach, nausea, dry mouth, drowsiness/ sleepiness/yawn, anxiety/ nervousness/ agitation, weight effects, and increased blood pressure. In 94.44% of their unique ads they mention sexual impairment and in 83.33% they mention insomnia. After Effexor (XR), Zoloft mentions the most risks of taking this antidepressant. They claim sleep related side effects as well as the same gastrointestinal side effects as Effexor (XR) in 100% of their unique advertisements. In 95.65% they mention sexual side effects and in 17.39% of their unique ads they also mention sweating and suicidal thoughts/ action. Prozac mentions headaches, rash, diarrhea/ constipation/ upset stomach and sleep related side effects in 100% of their ads. They also mention anxiety/nervousness/ agitation in 93.33% of their unique ads. For Paxil, 100% of their three unique ads list the risks of sweating, dizziness/ lightheadedness, diarrhea/ constipation/ upset stomach, nausea, drowsiness/ sleepiness/ yawn, and sexual impairment. In 66.67% of Paxil CR's ads they claim seizure/tremor, lack of energy/ weakness, injury/ trauma, vision impairment, infection, dry mouth, insomnia, anxiety/

nervousness/ agitation, and decreased appetite. No risk is mentioned in 100% of Wellbutrins unique ads, however in 87.5% they list seizure/ tremor, dry mouth, insomnia, and increased blood pressure. Other side effects are mentioned with varying percentages.

Overall, as mentioned before, Effexor (XR) mentions more risks than any other brand by a significant margin. Zoloft, even though it has the greatest number of unique advertisements, only mentions risks with the second highest frequency. The risks mentioned most frequently are sleep related side effects (insomnia and drowsiness/ sleepiness/ yawn), gastrointestinal side effects (diarrhea/ constipation/ upset stomach, nausea, and dry mouth) as well as the sexual side effect of impairment. Paxil is the only brand to mention the general health risks of injury/ trauma, vision impairment, infection as well as decreased appetite. The Wellbutrin types are the only brand to mention sore throat.

4. Type of appeal used in the advertisement:

In order to examine the type of appeal utilized in the advertisements, I examined a number of different features of ad appeal. The first thing I examined was the overall nature of the appeal. Each unique ad was coded with one type of appeal representing the major or primary appeal used in the ad. They occurred with the following frequencies:

TABLE 10: OVERALL AD APPEAL BY BRAND

	Celexa N = 1	Serzone N = 1	Effexor (XR) N = 18	Prozac N = 15	Paxil CR N =3	Wellbutrin SR & XL N = 8	Zoloft N =23	Total
Anecdotal/ Testimonial	0	0	0	0	0	5	4	**9**
Motivational	0	0	15	15	1	0	0	**31**
Promotional	0	0	0	0	0	1	0	**1**
Emotional	1	1	0	0	2	0	0	**4**
Popular Appeal	0	0	3	0	0	0	0	**3**
Safety	0	0	0	0	0	2	0	**2**
Informative	0	0	0	0	0	0	19	**19**
TOTAL	**1**	**1**	**18**	**15**	**3**	**8**	**23**	

The overall ad appeal used most frequently is motivational. This appeal is utilized in order to motivate people to self-diagnosis and therefore desire medication. This, of course, would lead to an increase in sales. This appeal is used by Effexor (XR) in 83.33% of their 18 unique ads, Prozac in 100% of their 15 unique ads, and Paxil in 33.33% of their 3 unique ads. An anecdotal/testimonial appeal is utilized by the Wellbutrins in 62.5% of their unique ads and in 17.39% of Zoloft's 23 unique advertisements. This is used by these brands in order to make the reader feel less stigmatized and that to be able to relate to the person featured in the ad. Popular appeals (only used by Effexor in 16.67% of their unique ads) attempt to do a similar thing; they want the reader to feel as if they are not alone in their suffering. As mentioned earlier, Wellbutrin SR is the only brand that contains an ad that has a solely promotional appeal. Zoloft is the only brand that utilizes an informative appeal in 82.61% of their unique ads. The Wellbutrins are the only brands that emphasize safety, the low risk of certain

side effects, in their advertisements and do so in 25% of their unique ads.

The next dimension of appeal I measure was the specific targeting techniques used in the ad. First is the use of people in the advertisements. These are the frequencies with which the ads feature pictures of people. Of the ads that include more than one person, there is always one person that can be considered the "primary" person. This signifies that either: they are the one clearly in the grips of depression and have/will be utilizing antidepressant medication; or that they are the person featured in the forefront of the advertisement and the consumer would be more likely to focus their attention on this individual. The Table 11 also shows the frequencies of the primary person's race, gender and age for the 34 unique ads that featured people.

TABLE 11: APPEARANCE OF PEOPLE BY BRAND

	Celexa N = 1	**Serzone N = 1**	**Effexor (XR) N = 18**	**Prozac N = 15**	**Paxil CR N =3**	**Wellbutrin SR & XL N = 8**	**Zoloft N =23**	**Total**
0 people	0	0	0	15	0	1	19	**35**
1 person	1	1	3	0	1	4	0	**10**
2 people	0	0	15	0	0	3	2	**20**
3 people	0	0	0	0	2	0	2	**4**
TOTAL	**1**	**1**	**18**	**15**	**3**	**8**	**23**	**69**

CHARACTERISTICS OF PRIMARY PERSON

	Celexa N = 1	Serzone N = 1	Effexor(XR) N = 18	Paxil CR N =3	Wellbutrin SR & XL N = 7	Zoloft N =4	Total
RACE							
White	1	1	18	3	7	2	**32**
Black	0	0	0	0	0	1	**1**
Asian	0	0	0	0	0	1	**1**
GENDER							
Male	0	0	0	0	-	0	**0**
Female	1	1	18	3	-	4	**27**
AGE							
Adult	1	1	0	3	7	4	**16**
Child	0	0	0	0	0	0	**0**
Teen	0	0	0	0	0	0	**0**
Elder	0	0	0	0	0	0	**0**

There are undeniable differences in how the different brands utilize people in their advertisements. Both Celexa and Serzone use one white, adult female in their singe unique ads, as does Wellbutrin SR in its unique ad that is not promotional. Effexor (XR) uses people in 100%l of its 18 unique advertisements- and again, these people are white, adult, and female. Paxil CR's unique ads contain people that are men, women and children; again they are all clearly identified as Caucasian. It is important to note that though men and children are also featured in some of the Paxil CR ads, it is always the woman that is portrayed as being in the grips of depression (refer to Figure 6). Prozac does not feature people in any of their fifteen unique advertisements. People are featured in 87.5% of Wellbutrin's unique advertisements. They all contain white adults; no gender is specified because a man and woman are both equally featured.

FIGURE 13
EXAMPLE OF AD WITH EQUAL GENDER FOCUS
Wellbutrin XL ad (U.S. News and World Report, February 28th, 2005)

Zoloft is unlike any other brand in that in the 17.39% of their unique ads that show people, they feature black, white and Asian men, women, and children. (Figure 14)

FIGURE 14
EXAMPLE OF AD FEAUTRING AFRICAN-AMERICANS:
Zoloft ad (Essence, June 2003)

Therefore, only half of the unique advertisements feature people as part of the ad appeal. 100% of Prozac's unique ads and 82.61% of Zoloft's unique ads do not show people. The other brands do so in 100% of their unique advertisements. Zoloft is the only brand to feature African Americans and Asians and does so in 8.70% of their

unique ads. Every other brand to feature people only show Caucasian adults 100% of the time.

Next is the area of subtle messaging techniques; the demeanor and social depiction of the people in the advertisements. In Celexa's one unique advertisement, the woman is featured alone but has a clear smile on her face. In fact, this ad states, "What's behind that smile? Ask your doctor about treating depression with Celexa." It is clear that this smile is the result of the medication. All three of Effexor's unique ads feature white women in the grips of depression. They are featured alone and have a sad/stern demeanor (refer to Figure 7). The fifteen Effexor XR ads are all fairly similar except for slight differences such as a phone number. They all feature one primary person (a white female) in three different stages (refer to Figure 15). In the first, she is shown alone and clearly has a sad/stern demeanor. The title underneath this picture is "Existing." Next, she is pictured with another white female, and she seems to have no particular expression. The caption under this says "Functioning." Lastly, it says "Back To Me." She is featured again with the white female, but now has a happy/smiling demeanor. This shows the continuum of her first suffering from depression, then starting treatment, then finally getting back to her "old self."

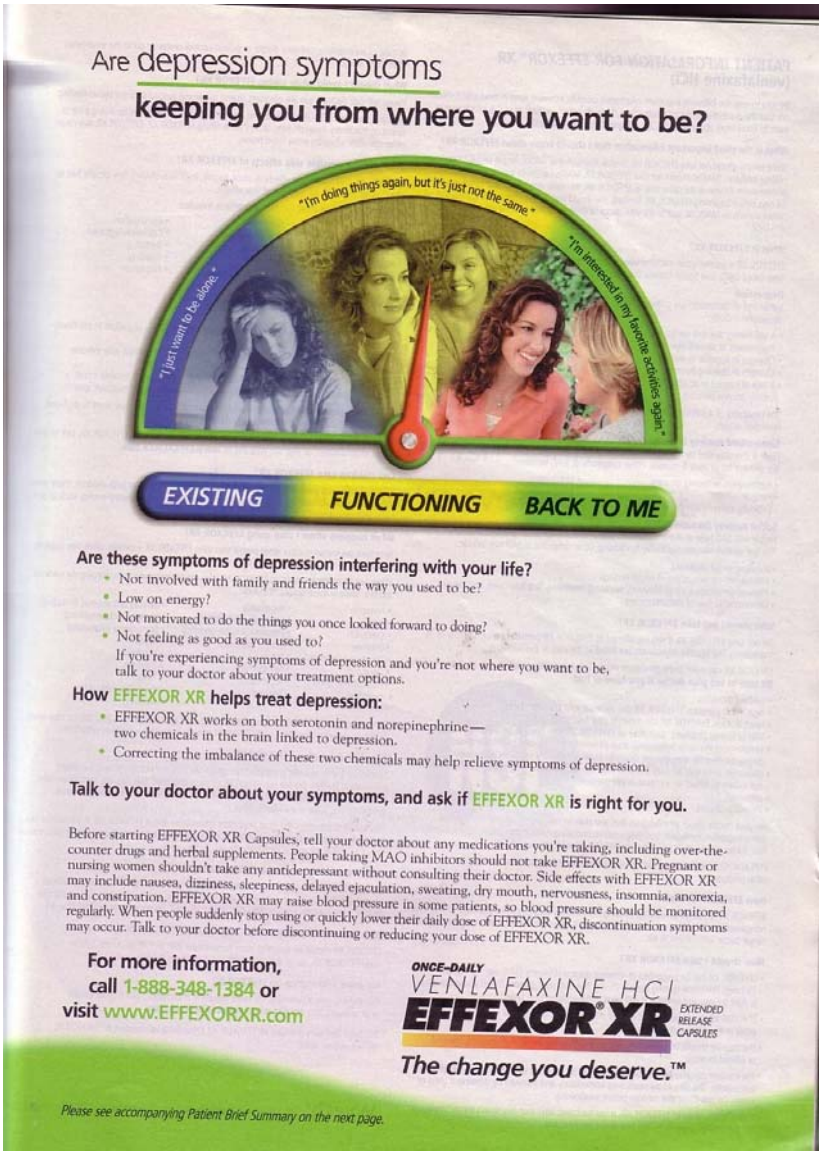


FIGURE 15
EXAMPLE OF AD WITH BEFORE/AFTER CONTINUUM:
Effexor XR ad (Good Housekeeping, July 2003)

Paxil CR, as shown in Figure 6, illustrates a Caucasian woman in the grips of depression and is separated spatially from her husband and young son. All three have a stern expression. However, in the lower left hand corner of the advertisement, there is a picture of the same woman and her son together, and they are smiling and laughing. It

clearly demonstrates that the medicine has reunited her with her son and helped her depression.

Wellbutrin's unique advertisements (except for the one promotional Wellbutrin SR ad) feature people use two different subtle messaging techniques. Both are used as a way to portray the benefit emphasized in all of these advertisements: that there is a low risk of sexual side effects. The first is to feature a white adult female alone, but who is happy and smiling (Figure 15).

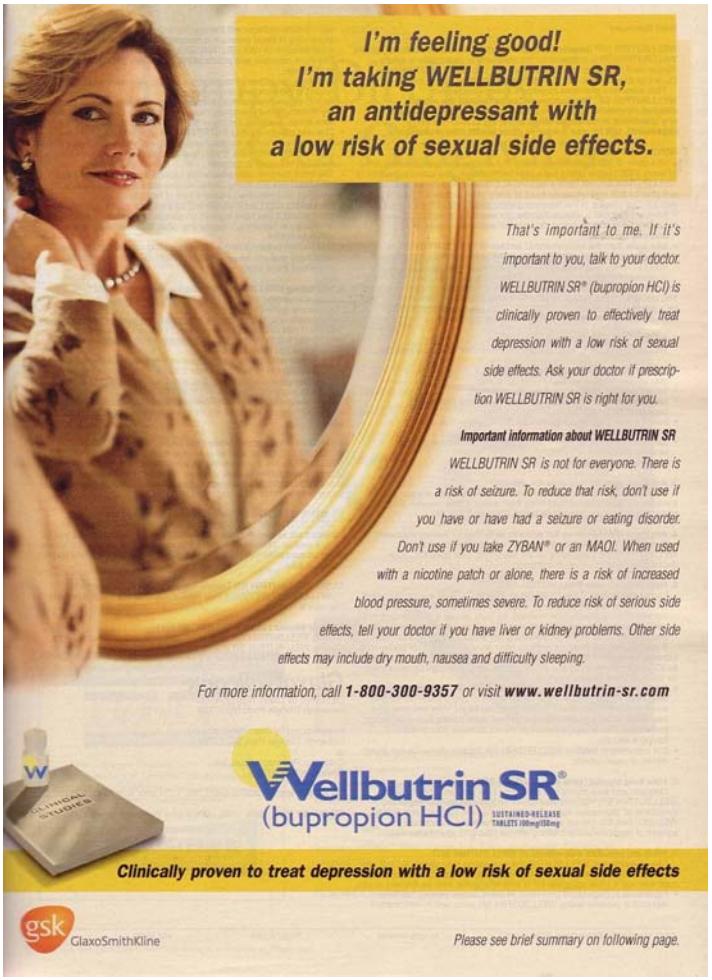


FIGURE 16
EXAMPLE OF SUBTLE MESSAGING TECHNIQUE:
Wellbutrin SR ad (People, March 5th, 2001)

She is looking at herself in the mirror and the caption next to it says, "I'm feeling good. I'm taking once-a-day WELLBUTRIN XL (or SR), an antidepressant with a low risk of sexual side effects." The other is to feature a man and woman in a romantic setting who are both happy and smiling (Figure 16). Again, the ad states that Wellbutrin XL has a low risk of sexual side effects. This is one of only two unique ads that do not obviously portray a woman as the primary sufferer of depression. Zoloft only features people in 17.39% of their unique advertisements; these are all ads specifically targeted at treating PMDD. They include people from different races and ages, but all featured with other people, happy and smiling (refer to Figure 13).

Overall, no particular subtle messaging technique is used more often than another. The visual appeals range from featuring a person depicting the "before" state of depression, the "after" state of depression once medication has been taken, and any state in the middle. People are feature alone or with others. The only visual appeal that is used with remarkable frequency across all the brands is the use of Caucasian, adult females in the advertisements.

2. Analysis of Results at the Frequency Level

The 69 unique ads appeared a total of 378 times in the sample magazines from 1995-2005. Ads from the seven brands occurred with the following frequencies:

TABLE 12: AD APPEARACE BY BRAND

BRAND	MANUFACTURER	N	%
CELEXA	Forest Pharmaceuticals	1	0.26
SERZONE	Bristol-Myers Squibb Company	1	0.26
EFFEXOR & EFFEXOR XR	Wyeth Pharmaceuticals	53	14.02
PROZAC	Eli Lilly	87	23.02
PAXIL CR	GlaxoSmithKline	27	7.14
WELLBUTRIN (SR & XL)	GlaxoSmithKline	47	12.43
ZOLOFT	Pfizer	162	40.21
TOTAL		**378**	**100%**

The three brands with the greatest number of unique advertisements (Effexor and Effexor XR, Prozac, and Zoloft) were also the brands that had ads appearing with the greatest frequencies. In fact, Zoloft advertisements made up 40.21% of all antidepressant advertisements which appeared in the magazine data set. Prozac advertisements made up nearly a quarter of all antidepressant ads, Effexor and Effexor XR made up 14.02% of all the ads. It is clear that these three brands are the heaviest advertisers of antidepressant medication seen by consumers. Both Wellbutrin types constituted 12.43% and Paxil CR contributed to 7.14% of all antidepressant advertisements. Celexa and Serzone each had only one ad appearance in my data set. Therefore, for the remainder of my results, these two brands will be collapsed into one category of antidepressant titled "Other."

AD APPEARNCE BY MAGAZINE CATEGORY

As previously described, the magazines were organized into four different categories: Women's magazines (Better Homes and Gardens, Good Housekeeping, TV Guide, Family Circle, McCalls-Rosies, and Woman's Day), Young Adult magazines (Vogue, Cosmopolitan, and Glamour), African American magazines (Ebony and Essence), and General Interest magazines (Newsweek, People, Reader's Digest, Sports Illustrated, Time, and U.S. News and World Report). The ads were found in these magazines and occurred with the following frequencies:

TABLE 13: AD APPEARANCE BY MAGAZINE

MAGAZINE	N	%
WOMEN'S	**149**	**39.42**
Better Homes and Gardens	23	6.08
Good Housekeeping	36	9.52
T.V. Guide	19	5.03
Family Circle	21	5.56
McCalls-Rosies	10	2.65
Woman's Day	40	10.58
YOUNG ADULT	**50**	**13.23**
Vogue	10	2.65
Cosmopolitan	11	2.91
Glamour	29	7.67
AFRICAN AMERICAN	**20**	**5.29**
Ebony	9	2.38
Essence	11	2.91
GENERAL INTEREST	**159**	**42.06**
Newsweek	14	3.70
People	61	16.14
Reader's Digest	16	4.23
Sports Illustrated	8	2.12
Time	23	6.08
U.S. News and World Report	37	9.79
TOTAL	**378**	**100.00**

Clearly, the advertisements appeared with greater frequency in some magazines over others. The magazines with the most appearances of antidepressant advertisements over this time period fall under the magazine categories of Women's and General Interest. The magazines with the largest ad appearances are People (16.14%) and Woman's Day (10.58%). U.S. News and World Report and Good Housekeeping also have ads appearing with substantial frequencies (9.79% and 9.52%, respectively). The other magazines each contain less than 8% of all antidepressant advertisement appearances.

MAGAZINE CATEGORIES BY BRAND

It is clear that the ads are appearing in certain magazines over others in order to reach a certain target market. The next issue to investigate is which specific antidepressant brands are advertising in these magazine categories.

TABLE 14: AD APPEARANCE BY BRAND DISTRIBUTED BY MAGAZINE CATEGORY

	EFFEXOR & EFFEXOR XR		PAXIL CR		PROZAC		WELLBUTRIN SR & XL		ZOLOFT		OTHER		TOTAL	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
WOMEN'S	25	47.17	6	22.22	19	21.84	15	65.96	83	51.23	1	50.00	**149**	**39.42**
YOUNG ADULT	0	0	6	22.22	17	19.54	1	2.12	25	15.43	1	50.00	**50**	**13.23**
AFRICAN AMERICAN	0	0	0	0	7	8.05	0	0	13	8.02	0	0	**20**	**5.29**
GENERAL INTEREST	28	52.83	15	55.56	44	50.57	31	31.91	41	25.31	0	0	**159**	**42.06**
TOTAL	**53**	**100**	**27**	**100**	**87**	**100**	**47**	**100**	**162**	**100**	**2**	**100**	**378**	**100**

In analyzing ad appearance by brand distributed by magazine category, certain targeting trends become apparent. The Effexors only target in Women's and General Interest magazines and do so fairy equally, 47.17% and 52.83% respectively. GlaxoSmithKline, the manufacturer of Paxil CR and both Wellbutrins, advertised these two brands in Women's, Young Adult, and General Interest magazines but not those targeted at African Americans. The largest percentage of the ads for Paxil CR brand appeared in General Interest magazines (55.56%) and the largest percentage of the ads for the Wellbutrins appeared in Women's magazines (65.96%). The only brands that target African American magazines are Prozac and Zoloft. However, they do not advertise equally across the magazine categories. 50.27% of Prozac's ads appear in General Interest magazines, and 51.23% of Zoloft ads appear in Women's magazines. A mere 8% of the ads for these two brands appear in African American magazines.

Overall, the most advertisements for antidepressants appear in General Interest magazines; 42.06% of all the ads appear in this magazine category. Women's magazines have the second most antidepressant ad appearances following close behind General Interest magazines, totaling 39.42% of the advertisements. 13.23% of the ads appear in Young Adult magazines and only 5.29% appear in African American magazines.

TIME TRENDS

Another crucial aspect of any inspection of the antidepressant advertisement market is the years in which these ads appeared.

AD APPEARANCE BY YEAR

The following is a graph of the frequency of ad appearance by year. The brand names indicate when that respective brand was approved by the FDA. Prozac, Zoloft, Effexor and Serzone were all approved prior to 1995, the date of the first ad appearance (they were approved in 1987, 1991, 1993 and 1994 respectively).

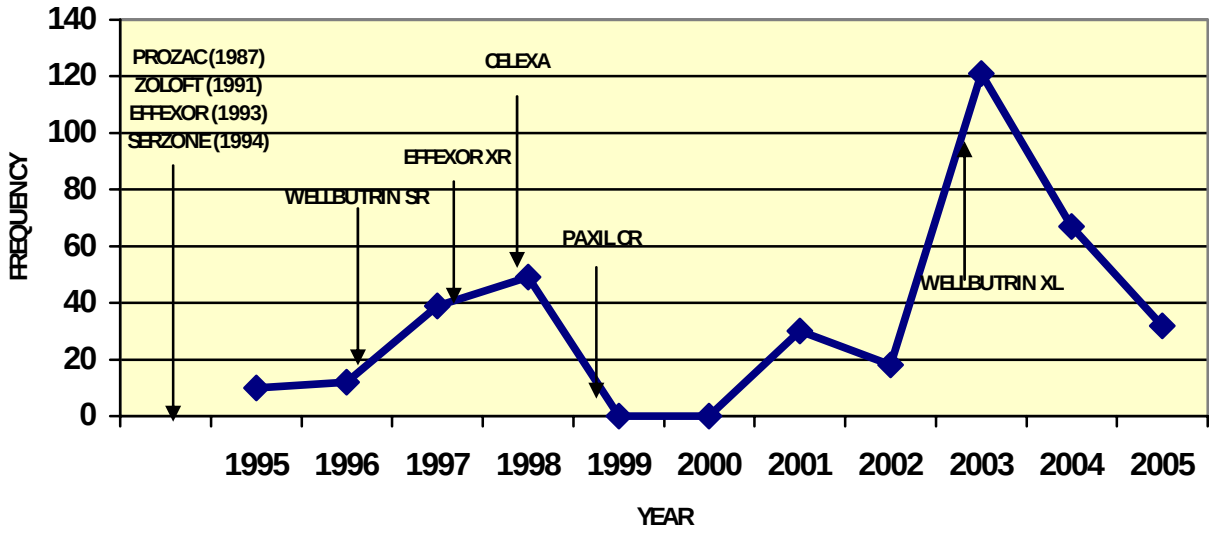


FIGURE 17
AD APPEARNCE BY YEAR

Before 1995, the date of the first ad appearance, four drugs in my data set were already on the market: Prozac, Zoloft, Effexor, and Serzone. However, though these drugs already had FDA approval, strangely there are no ads appearing for these brands before this date. Once the ads began to appear in 1995, they increased at a fairly steady rate until 1998. During this four year period, three new drugs were introduced into the market: Wellbutrin SR, Effexor XR, and Celexa. Then, the most interesting thing to note when looking at time trends of antidepressant advertisements occurs; there is a complete lack of ads that appear in my magazine data set during 1999 and 2000. There are several

possible explanations for this occurrence. As mentioned earlier, the FDA relaxed its regulatory requirements for DTC advertising on broadcast media in August 1997 (Calfee 2001, FDA 1997). This decision triggered large increases in the volume of television DTC advertising while simultaneously prompting a shift from print to broadcast media. In August 1999, after a two-year review, the FDA reaffirmed its new policy, while also announcing its intention to review DTC advertising again in 2001 (FDA 1999a). Therefore, the lack of advertisements could be the combined effect of the switch to broadcast media advertising as well as the anticipation of FDA's impending future DTC advertising review (Calfee, 2001). Another possible explanation is that after market shares have been established and brand awareness achieved, DTC advertisement spending declines. In 1999, among all antidepressants, only Paxil had some DTC advertisement spending (2.2% of sales), while Celexa, Effexor, Prozac, Serzone and Zoloft had no DTC advertisement spending (Berndt 228-9). Also, Prozac's advertising only ran from August 1997 to April 1998 (Grow et al, 171). Since Prozac contributed to 23.02% of all the advertisements in my data set, this cease could possibly contribute to the lack of ads in the two years after.

After the deficiency of ads from 1999 to 2000, the ads increased somewhat steadily until 2003 when they reached their maximum. In this year, 32.01% of all the ad appearances occurred. For the remaining years in the data set, the frequencies of ads decrease at a steady rate. One possible reason for this decline is that spending is much lower when a generic competitor to the brand is on the market. This is due to the fact that the branded drugs may not be able to recoup the benefits from DTC advertisement

spending when generic competition exists. The introduction of generic antidepressants occurred in the following years:

TABLE 15: GENERIC ANTIDEPRESSANT APPROVALS

GENERIC	BRAND NAME	DATE OF FDA APPROVAL
Citalopram	Celexa	October 2004
Nefazodone	Serzone	September 2003
Venlafaxine	Effexor	August 2006
Bupropion SR	Wellbutrin SR	January 2004
Bupropion XL	Wellbutrin XL	December 2006
Fluoxetine	Prozac	August 2001
Sertraline	Zoloft	June 2006

Since a majority of the generics were introduced from 2003 on, it is possible that this was part of the reason ads declined after this year. In order to further understand what is driving the ups and downs of ad appearances, it is necessary to analyze the ads throughout this decade distributed by brand.

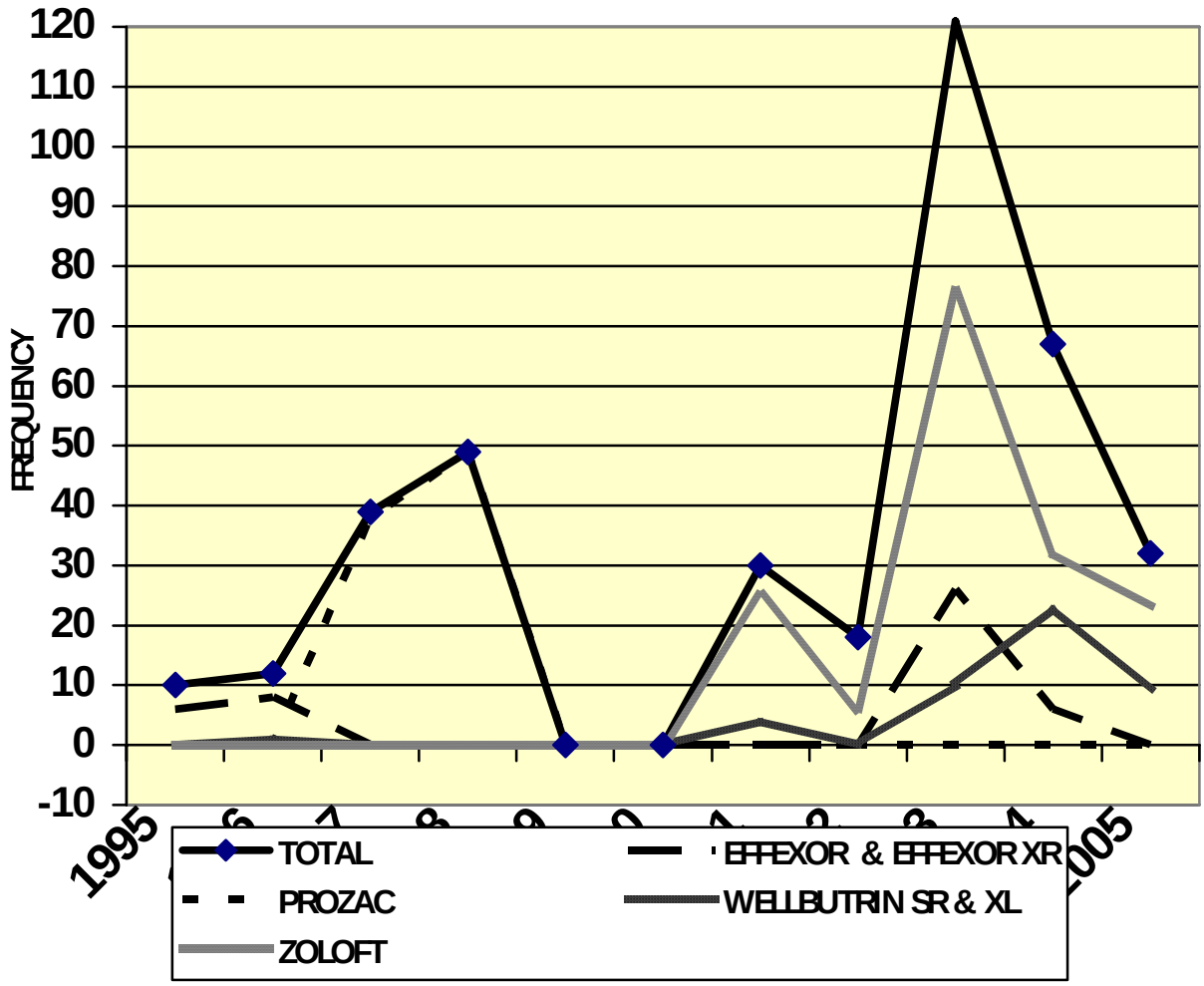


FIGURE 18
AD APPEARNCE BY YEAR DISTRUBTED BY BRAND

There are clear trends in analyzing what brands advertised in each year, especially the four brands with the greatest ad appearances: Effexor (XR), Prozac, Wellbutrin (SR and XL), and Zoloft. The increase in ads from 1995 to 1998 was driven mostly by the appearance of Prozac advertisements. Eli Lilly, the maker of Prozac, was the first pharmaceutical manufacturer to begin DTC advertising for antidepressants. They were also the first to cease advertising (probably due to Prozac's impending patent expiration) (Grow et al, 2006). Though Paxil is not included in Figure 18, it is important to note that this brand did have sporadic ad placement in 1999-2001, but none of these ads appeared

in the magazines in my data set. They did, however, have extensive placement in 2002 in which my magazines featured 12 Paxil CR ads. The small spike in 2001 can be contributed mostly to Zoloft; this is the year Pfizer began running advertisements for its Zoloft brand. Thirty advertisements appeared in this year, and 83.33% were for this antidepressant. Zoloft continues to drive the increase in advertisements following 2002 in addition to growth in both Effexor XR and Wellbutrin XL ads. The same brands seem to be responsible for the subsequent decline in ad appearance thereafter. Therefore, it becomes clear that what brands advertised in what year drive any discernable trends. Specifically, Effexor (XR), Prozac, Wellbutrin (SR and XL), and Zoloft are the brands that consumers will see most often in antidepressant advertisements. Which specific brand is seen most prevalently depends on the year (see Appendix 3).

Causes of Depression

The frequencies with which the following statements regarding the causes of depression are made in the advertisements are:

TABLE 16: APPEARANCE OF CAUSES

CAUSE	N	%
Biochemical/ Medical Causes		
"When you're clinically depressed the level of serotonin may drop."	55	14.55
"Depression could be caused by a chemical imbalance."	142	37.57
"PMDD is related to hormonal changes and chemicals in your body."	39	10.32
Personal Causes		
"It can be triggered by stressful life, or it can appear suddenly."	74	19.58
Causes are Unspecified/ Unknown		
"Depression is a real illness with real causes.	107	28.31
"The cause of depression is unknown."	100	26.46
No causes identified	31	8.21

** multiple causes may be identified in a single advertisement, therefore percentages do not add up to 100.00%

91.79% of all ads had some statement concerning the causes of depression. There are three major messages regarding these causes that are reaching the consumer through antidepressant advertisements. First, is that depression is a real illness with real causes; this appears in 28.31% of all ad messages. It can be inferred that antidepressant manufacturers would want consumers to understand depression as a real disease as opposed to a merely a "mood" because then it would be logical and reasonable to take medication. The next prevalent message, however, is that the cause of depression is unknown. This is stated in a quarter of all the ad appearances, 26.46%. Lastly, as I had hypothesized, 37.57% of all ads stated that depression could be caused by a chemical imbalance. This is the statement regarding causes that is made most frequently in all of the advertisements.

Only 8.21% of the ads identify no causes of depression. Therefore, the majority of advertisements educate consumers about the causes of depression to some degree. As for mentioning personal causes of depression, statements like this appeared in 19.58% of all advertisements. Therefore, this type of cause was mentioned with substantial frequency is not a prevalent message seen by consumers.

Next, I analyzed how the causes of depression are portrayed to the consumer differ by what magazine category the ad appeared in.

TABLE 17: MAGAZINE CATEGORIES DISTRIBUTED BY APPEARANCE OF CAUSES

CAUSE	WOMEN'S		YOUNG ADULT		AFRICAN AMERICAN		GENERAL INTEREST	
	N= 149	%	N=50	%	N=20	%	N=159	%
Biochemical/ Medical Causes								
"When you're clinically depressed the level of serotonin may drop."	11	7.38	11	22.00	4	20.00	29	18.24
"Depression could be caused by a chemical imbalance."	61	40.94	22	44.00	11	55.00	48	30.19
"PMDD is related to hormonal changes and chemicals in your body."	20	13.42	8	16.00	4	20.00	7	4.40
Personal Causes								
"It can be triggered by stressful life, or it can appear suddenly."	16	10.74	13	26.00	5	25.00	40	25.16
Causes are Unspecified/ Unknown								
"Depression is a real illness with real causes.	22	14.77	17	34.00	7	35.00	61	38.36
"The cause of depression is unknown."	52	34.90	11	22.00	9	45.00	28	17.61

** multiple causes may be identified in a single advertisement, therefore percentages do not add up to 100.00%

Of the 149 advertisements that appeared in woman's magazines, the majority of the statements regarding the causes of depression are that it could be caused by a chemical imbalance (40.94%), or that the causes are unknown (34.90%). Therefore, these are the messages reaching the readers of woman's magazines with the greatest frequency. In fact, woman's magazines infrequently mention anything regarding personal causes of depression. Only a small percentage of ads, 10.74, claim that the causes of depression can be triggered by a stressful life, or that depression can appear suddenly. In young adult magazines, similarly to woman's magazines, the chemical imbalance cause of depression is also mentioned in the largest percentage of the 50 ads; 44.00%. However, the ads that appear in young adult magazines also state that depression is a real illness with real causes 34.00% of the time. In magazines targeted to African Americans, more than half of the antidepressant advertisements (55.00%) claim that depression could be caused by a chemical imbalance. This magazine category has the highest percentage of its ads, more than any other magazines category, making this biochemical/medical statement. African American magazines also have the greatest percentage of their ads stating that the cause of depression is unknown (45.00%). General interest magazines are the only magazine category that doesn't have the highest percentage of its ads stating that depression could be caused by a chemical imbalance, though this is still stated in 30.19% of its ads. The most prevalent statement in these ads is that depression is a real illness with real causes; this appears in 38.46% of all general interest ads. This magazine category also has the lowest percentage mentioning that PMDD is related to hormonal changes and chemicals in your body. This could possibly be due to the fact that these magazines have both a male and female readership.

In analyzing the causes of depression and how they are distributed across magazine category, it is clear that some causes are listed more frequently in certain magazine categories over others. There are three biochemical/medical causes, and each is used with varying frequency in the different magazine categories. "when you're clinically depressed the level of serotonin may drop" is mentioned most frequently in general interest magazines and is mentioned equally in both woman and young adult magazines. Claiming that depression is, more generally, caused by a chemical imbalance, is mentioned with the most frequency in women's magazines. Claims regarding PMDD are used more substantially in woman's magazines than any other magazine category.

The magazine category that includes the highest frequency of ads that mention personal causes of depression such as a stressful life is young adult magazines. In fact, personal causes are mentioned in about a quarter of the ads for every magazine category except for women's magazines (where they are only mentioned in 10.74% of ads). The same holds true for saying that depression is a real illness with real causes. This statement is made with fairly equivocal percentages within every magazine category except for Women's magazines where it is mentioned half as frequently (in only 14.77% of the ads). Stating that the cause of depression is unknown is mentioned most frequently in African American magazines (45.00%).

Self-Diagnosis

The frequencies of how many ads include the following symptoms of depression are:

TABLE 18: SELF-DIAGNOSIS: SYMPTOMS OF DEPRESSION

SYMPTOMS	N = 378	%
SEVERELY PSYCHOLOGICAL		
Everyday life unbearable	134	35.45
Thoughts of Death/ Suicide	25	6.61
PHYSICAL/ PSYCHOLOGICAL		
Inability to Concentrate	108	28.57
Loss of Interest	146	38.62
High Stress/Anxiety	68	17.99
PHYSICAL ACTIVITY CHANGE		
Change in Sleep Patterns	108	28.57
Change in appetite	109	28.84
Fatigue/Low energy	210	55.56
DEPRESSIVE SYMPTOMS		
Depression/ Sadness	209	55.29
Sadness lasts weeks	25	6.61
OTHER		
Agitation/ irritability	174	46.03
Restlessness	21	5.56

**multiple symptoms may be identified in a single advertisement, therefore percentages do not add up to 100.00%

The symptoms of depression mentioned most often in antidepressant ads are fatigue/low energy (55.56%), depression/sadness (55.29%), and agitation/irritability (46.03%). The next most prevalent symptoms are a loss of interest (38.62%) and everyday life being unbearable (35.45%). Approximately 28% of the ads mention an inability to concentrate, change in sleep patterns, and change in appetite. High stress and anxiety is a symptom mentioned in 17.99% of ads and the obvious symptom of sadness (that lasts weeks) appears in 6.61% of ads. The symptoms of depression that appear with the lowest frequency are thoughts of death/suicide (6.61%) and restlessness (5.56%).

The low frequency of mentioning thoughts of death or suicide might be because of its severity and seriousness. The low frequency of restlessness might be because it could be considered a subcategory of agitation/irritability or inability to concentrate.

Overall, the most prevalently mentioned symptoms fall under various categories. No one category of symptoms appears substantially more than any other category. By providing the reader with a wide range of symptoms, there is a much greater chance for self-diagnosis.

Next, I analyzed the appearance of symptoms of depression by magazine category.

TABLE 19: MAGAZINE CATEGORIES DISTRIBUTED BY SYMPTOMS OF DEPRESSION

	WOMEN'S		YOUNG ADULT		AFRICAN AMERICAN		GENERAL INTEREST	
SYMPTOMS	**N= 149**	**%**	**N=50**	**%**	**N=20**	**%**	**N=159**	**%**
SEVERELY PSYCHOLOGICAL								
Everyday life unbearable	45	30.20	20	40.00	8	40.00	61	38.36
Thoughts of Death/ Suicide	6	4.03	1	2.00	0	0	18	11.32
PHYSICAL/ PSYCHOLOGICAL								
Inability to Concentrate	26	17.45	23	46.00	7	35.00	52	32.70
Loss of Interest	65	43.62	15	30.00	6	30.00	60	37.74
High Stress/Anxiety	31	20.81	9	18.00	6	30.00	22	13.84
PHYSICAL ACTIVITY CHANGE								
Change in Sleep Patterns	50	33.56	24	48.00	7	35.00	84	52.83
Change in appetite	24	16.11	17	34.00	7	35.00	61	38.36
Fatigue/Low energy	80	53.69	27	54.00	11	55.00	92	57.86
DEPRESSIVE SYMPTOMS								
Depression/ Sadness	86	57.72	31	62.00	13	65.00	79	49.69
Sadness lasts weeks	5	3.36	2	4.00	0	0	18	11.32
OTHER								
Agitation/ irritability	59	39.60	34	68.00	13	65.00	68	42.77
Restlessness	6	4.03	6	12.00	0	0	9	5.66

**multiple symptoms may be identified in a single advertisement, therefore percentages do not add up to 100.00%

The symptoms that occur most often occur in women's magazines are fatigue/ low energy (53.69%) and depression/ sadness (57.72%). In young adult magazines the most reoccurring symptoms of depression that are listed are, similar to woman's magazines, depression/ sadness (62.00%) in addition to agitation/ irritability (68.00%). Interestingly, antidepressant ads in African-American magazines are most likely to list the same two symptoms of depression as in young adult magazines; depression/ sadness and agitation/irritability. Both appear in 65.00% of ads in this magazine category.. In general readership magazines, the most frequently referred to symptoms are change in sleep patterns (52.83%) and fatigue/ low energy (57.86%). As in every other magazine category, depression/sadness is also referred to in a large portion of the advertisements (49.69%).

Overall, after running this analysis (Table 19), there seems to be no apparent trends regarding which symptoms are listed in what magazine category. Depression/ sadness seems to be mentioned frequently in every magazine category, as is fatigue/ low energy. Physical/ psychological symptoms as well as symptoms involving physical activity changes are mentioned with substantial frequency within all magazine types. Thoughts of death and suicide and restlessness are rarely mentioned in any of the magazine categories and are never mentioned in African American magazines.

I also analyzed whether the symptoms are presented in a quiz or checklist format.

TABLE 20: SELF-DIAGNOSIS: PRESENTATION OF SYMPTOMS

PRESENTATION OF SYMPTOMS	N = 378	%
QUIZ FORMAT	44	11.64
CHECKLIST FORMAT	21	5.56

A questionnaire or quiz regarding one's symptoms occurred 44 times, in only 11.64% of the total ads. A checklist of symptoms appeared 21 times in only 5.56% of the ads. Therefore, though this tactic is used, it does not appear with a remarkable frequency and therefore probably does not contribute substantially to self-diagnosis.

In addition, I noted with what frequency the ads provide a phone number, website, or free information/booklets.

TABLE 21: SELF-DIAGNOSIS: FURTHER CONTACT INFORMATION

FURTHER CONTACT INFORMATION	N = 378	%
PHONE NUMBER	272	71.96
WEBSITE	321	84.92
FREE INFORMATION/ BOOKLET	8	2.12
ASK/NOTIFY/ SEE YOUR DOCTOR	377	99.74

The frequency of ads that provided a phone number was 272, or in 71.96% of the ads. 321 times an ad appeared that provided a website; totaling 84.92% of the ads. Therefore a majority of advertisements provide the reader with further contact information. Free information or booklets was a tactic used much more infrequently. It was only offered 8 times for a total of 2.12% of the ads. Clearly, this is not a popular offering used by the brand manufacturers. The last aspect of self-diagnosis I analyzed is whether the ads specifically state to "ask/notify/see your doctor." This occurred in every ad but one (the promotional ad) for a total of 377 times or in 99.74% of the ads. It is clear that this is the most frequent message in antidepressant advertisements and is utilized by every manufacturer. This is not surprising considering that a patient must be prescribed a prescription drug from a doctor.

The features of self-diagnosis were analyzed in terms of what magazines category they appeared in. Checklists only appear in ads featured in women's magazines (2.68%) or in general interest magazines (10.69%). Quiz/questionnaires mainly appear in the same magazines; in 18.22% of Women's magazines and in 9.43% of General Interest magazines. Free information or booklets are never offered in magazines categorized as African-American, but are offered in 8.01% of ads in Young Adult magazines, in 2.01% of Women's magazines and in 1 ad in a General Interest magazine (0.63%). A recommendation to ask/notify/see your doctor appears in all types of magazines.

Benefits and Risks

I analyzed the frequency with which both benefits and risks are mentioned in antidepressant advertisements.

TABLE 22: BENEFITS OF MEDICATION

BENEFITS	N	%
General Health		
Works to correct chemical imbalance	132	34.92
Reproductive Health		
Treats Pre Menstrual Dysphonic Disorder	39	10.32
Psychological Health		
Product helps treat Post Traumatic Stress Syndrome	9	2.38
Won't change your personality	85	22.49
General Claim		
Low occurrence of side-effects/ not usually serious/ well tolerated	193	51.06
Not habit forming	115	30.42
Not associated with weight gain	27	7.14
Convenient	38	10.05

** multiple benefits may be claimed within a single advertisement, therefore percentages do not add up to 100.00%

The benefits most frequently stated in antidepressant ads are general product claims such that there is a low occurrence of side-effects, that these side effects are not usually seriously and they are well tolerated (51.06%). Other benefits frequently claimed in these ads fall under general health: that these drugs work correct chemical imbalances (34.92%). This benefit is most likely mentioned in connection to the cause that depression is caused by a chemical imbalance. The next most prevalent benefit mentioned is that the medication is not habit forming (30.42%) and that it won't change one's personality (22.49%). The reproductive health claim that the medication treats PMDD and the general health claim that it is convenient each appear in about 10% of ads. The benefits mentioned the most infrequently are that it is not associated with weight gain (7.14%) and that the product helps to treat Post Traumatic Stress Syndrome, in 2.38% of ads.

Next, I analyzed which benefits appeared in each magazine category.

TABLE 23: MAGAZINE CATEGORIES DISTRIBUTED BY BENEFITS

	WOMEN'S		YOUNG ADULT		AFRICAN AMERICAN		GENERAL INTEREST	
	N	%	N	%	N	%	N	%
BENEFITS								
General Health								
Works to correct chemical imbalance	73	48.99	11	22.00	9	45.00	39	24.53
Reproductive Health								
Treats Pre Menstrual Dysphonic Disorder	20	13.42	8	16.00	4	20.00	7	4.40
Psychological Health								
Product helps treat Post Traumatic Stress Syndrome	5	3.36	0	0	0	0	4	2.52
Won't change your personality	19	12.75	18	36.00	7	35.00	41	25.79
General Claim								
Low occurrence of side-effects/ not usually serious/ well tolerated	64	42.95	40	80.00	12	60.00	77	48.43
Not habit forming	53	35.57	20	40.00	6	30.00	36	22.64
Not associated with weight gain	13	8.72	7	14.00	0	0	7	4.40
Convenient	11	7.38	0	0	0	0	27	16.98

** multiple benefits may be claimed within a single advertisement, therefore percentages do not add up to 100.00%

In woman's magazines, the benefit most frequently referred to (in 48.99% of the ads) is the general health benefit that it works to correct a chemical imbalance. In 42.95% of the ads in woman's magazines, it also claims the benefit that there is a low occurrence of side-effects/ not usually serious/ well tolerated. Reproductive health claims and psychological health claims are mentioned with varying frequencies, but none occur in more than 14% of ads. In young adult magazines, the benefits most frequently mentioned are general claims: that there is a low occurrence of side-effects/ not usually

serious/ well tolerated (80% of ads), and that the medication is not habit forming (40% of ads). The medication being convenient is not mentioned in any of the ads appearing in young adult magazines (the medication being convenient is only mentioned in women's and general interest magazines), and neither is the psychological health claim that the product helps to treat Post Traumatic Stress Syndrome. In fact, these three benefits in addition to not being associated with weight gain are also not mentioned in any advertisements in African American magazines. Antidepressant ads in African-American magazines tend not to list a number of both benefits and risks. The benefit that is most frequently mentioned is that there is a low occurrence of side-effects/ not usually serious /well tolerated. This claim appears in 60% of all antidepressant ads in African-American magazines. As for general interest magazines, all the benefits are mentioned with varying degrees, with the one mentioned most frequently being that there is a low occurrence of side-effects/ not usually serious /well tolerated.

The frequency of risks are as follows:

TABLE 24: RISKS OF MEDICATION

RISKS	N	%
General Health	**552**	**20.23**
Sweating	120	31.75
Dizziness/ lightheadedness	96	25.40
Headaches	93	24.60
Rash	87	23.02
Seizure/tremor	68	17.99
Lack of energy/ weakness	29	7.67
Injury/ trauma	26	6.88
Vision impairment	26	6.88
Infection	7	1.85
Gastrointestinal	**900**	**32.98**
Diarrhea, constipation, upset stomach	331	87.57
Nausea	290	76.72
Dry mouth	270	71.43
Sore throat	15	3.97
Sleep Related	**666**	**24.40**
Insomnia	335	88.62
Drowsiness/ sleepiness/ yawn	331	87.57
Sexual Side Effects	**240**	**8.79**
Sexual impairment	240	63.49
Psychological	**177**	**6.49**
Anxiety/ nervousness/ agitation	138	36.51
Suicidal thoughts/ action	32	8.47
Decreased appetite	7	1.87
Weight Effects	**95**	**3.48**
Weight changes/anorexia	95	25.13
Cardiovascular	**99**	**3.63**
Increased blood pressure	99	26.19

The category of risks that has the greatest appearances within the advertisements is gastrointestinal risks, even though only four risks are included in this category. These four side-effects are mentioned a total of 906 times in the advertisements, 32.98% of all benefits mentioned. The next category with the most prevalence is sleep related side effects (24.40% of all benefits mentioned). Only two risks are included in this group;

insomnia and drowsiness/ sleepiness/ yawn; they both appear a total of 666 times. In terms of individual risks, the ones most frequently listed in antidepressant ads are insomnia (88.62%) and drowsiness/ sleepiness/ yawn (82.57%). Sexual impairment is also a risk in a total of 63.49% of the ads reaching the consumer. The gastriointestinal risks of diarrhea/constipation/upset stomach (82.57%) and nausua (76.72%) are also frequently mentioned in the ads. Next, I analyzed which risks appeared in each magazine category.

TABLE 25: MAGAZINE CATEGORIES DISTRIBUTED BY RISKS

	WOMEN'S		YOUNG ADULT		AFRICAN AMERICAN		GENERAL INTEREST	
	N	%	N	%	N	%	N	%
RISKS								
General Health								
Sweating	52	34.90	14	28.00	4	20.00	50	31.45
Dizziness/ lightheadedness	33	22.15	8	16.00	0	0	55	34.59
Headaches	19	12.75	17	34.00	7	35.00	50	31.45
Rash	19	12.75	17	34.00	7	35.00	44	27.67
Seizure/tremor	22	14.77	7	14.00	0	0	39	24.53
Lack of energy/ weakness	5	3.36	1	2.00	0	0	23	14.47
Injury/ trauma	5	3.36	6	12.00	0	0	15	9.43
Vision impairment	5	3.36	6	12.00	0	0	15	9.43
Infection	1	0.67	0	0	0	0	6	3.77
Gastrointestinal								
Diarrhea, constipation, upset stomach	134	89.93	49	98.00	20	100.00	128	80.50
Nausea	130	87.25	33	66.00	13	65.00	114	71.70
Dry mouth	125	83.89	27	54.00	13	65.00	105	66.04
Sore throat	2	1.34	1	2.00	0	0	12	7.55
Sleep Related								
Insomnia	140	93.96	43	86.00	20	100.00	132	83.02
Drowsiness/ sleepiness/ yawn	134	89.93	49	98.00	20	100.00	128	80.50
Sexual Side Effects								
Sexual impairment	112	75.17	31	62.00	13	65.00	84	52.83
Psychological								
Anxiety/ nervousness/ agitation	43	28.86	16	32.00	5	25.00	74	46.54
Suicidal thoughts/ action	13	8.72	7	14.00	0	0	12	7.55
Decreased appetite	1	0.67	0	0	0	0	6	3.77
Weight Effects								
Weight changes/ anorexia	38	25.50	1	2.00	0	0	56	35.22
Cardiovascular								
Increased blood pressure	40	26.85	1	2.00	0	0	58	36.48

In terms of risks, gastrointestinal, sleep related, and sexual side effects are mentioned with the most frequency overall. The risk mentioned the most in woman's magazines is insomnia- this is mentioned in 93.96 of all ads that appeared in this magazine category. In young adult magazines, 98% of antidepressant advertisements mention the risk of diarrhea/ constipation/ upset stomach as well as drowsiness/sleepiness/yawn. These ads never mention the risk of infection and decreased appetite as ads in woman's and general interest magazines do. Antidepressant advertisements in African-American magazines mention the least number of risks. Every single ad states the risk of diarrhea/ constipation/ upset stomach, insomnia, and drowsiness/sleepiness/ yawn. A majority (65%) also mention nausea, dry mouth, and sexual impairment. However none of the ads in this magazine category mention any kind of weight effects or cardiovascular risks. General interest magazines mention all of the risks with varying frequencies. The ones mentioned most often are insomnia (83.02%), diarrhea/constipation/upset stomach and drowsiness/sleepiness/yawn (both 80.50%).

Type of appeal used in the advertisement:

The frequency with which each major ad appeal appeared is as follows:

TABLE 26: OVERALL NATURE OF AD APPEAL

	N	**%**
ANECDOTAL/TESTIMONIAL	61	16.13
MOTIVATIONAL	125	33.07
PROMOTIONAL	1	0.26
EMOTIONAL	23	6.08
POPULAR APPEAL	21	5.56
SAFETY	8	2.12
INFORMATIVE	139	36.77
TOTAL	**378**	**100.00**

The largest percentage of ads uses an informative appeal. It has been argued that the purpose of DTC advertising should be to educate the consumer. A total of 36.77% of advertisements do so. The other most popular overall ad appeal is motivational. 33.07% of ads use a motivational appeal and therefore a large portion of the ads that consumers see encourage them to take antidepressant medication. It can be inferred that manufacturers utilize this appeal in order to increase sales. The other popular ad appeal is anecdotal/motivational (16.33%). Emotional and popular appeals are used quite infrequently; 6.08% and 5.56% respectively. Safety and promotional appeals are rarely used. Only 2.12% of ads use a safety appeal and only one ad (0.26%) uses a promotional appeal.

MAGAZINE CATEGORIES DISTRIBUTED BY OVERALL NATURE OF AD APPEAL

I ran this analysis, and the overall ad appeal does not vary substantially by magazine category.

SPECIFIC TARGETING TECHNIQUES

TABLE 27: APPEARANCE OF PEOPLE IN ADVERTISEMENTS

	N	%
0 PEOPLE	211	55.82
1 PERSON	60	15.87
2 PEOPLE	43	11.38
3 PEOPLE	64	16.93
TOTAL	**378**	**100**

The majority of advertisements the consumer sees actually do not contain pictures of people. A total 55.82% of these ads include only text, pictures, or anthropomorphic characters. The remaining advertisements contain one, two, or three people; each appears with relatively the same frequency. 16.93% of ads contain three people, 15.87% of ads contain one person, and 11.38% of ads contain two people.

MAGAZINE CATEGORIES DISTRIBUTED BY APPEARANCE OF PEOPLE

I ran this analysis, and there were no significant trends.

Of the ads that include more than one person, there is always one person that can be considered the "primary" person as discussed earlier. This primary person has a race, gender, and age as follows:

TABLE 28: CHARACTERISTICS OF PRIMARY PERSON

	N	%
RACE		
White	156	93.41
Black	4	2.39
Asian	7	4.19
GENDER		
Male	0	0
Female	156	93.41
AGE		
Adult	167	100.00
Child	0	0
Teen	0	0
Elder	0	0
TOTAL	**167**	**100.00**

There are obvious disparities in regards to the races, gender, and ages of people featured in antidepressant advertisements. Out of the 167 advertisements featuring people, an overwhelming 93.41% of these advertisements feature Caucasian people. In fact, in these advertisements, all of the people in the ads (not only the primary person) are white. Only 2.39% and 4.19% of the ads feature a primary person who is African-American or Asian, respectively. When looking at gender, again there is an overwhelming disparity within the advertisements. A remarkable 93.41% of the advertisements feature the primary person as a female. The only two unique ads (that appeared eleven times) that were not included were because there is no obvious primary person. It equally features both a male and female white adult (refer to Figure 13). All of the ads with people featured an adult as the primary person.

MAGAZINE CATEGORIES DISTRIBUTED BY CHARACTERISITCS OF PRIMARY PERSON

	WOMEN'S		YOUNG ADULT		AFRICAN-AMERICAN		GENERAL INTEREST	
	N	%	N	%	N	%	N	%
RACE								
White	67	100.00	12	75.00	0	0	77	96.25
African-American	0	0	0	0	4	100.00	0	0
Asian	0	0	4	25.00	0	0	3	3.75

All of the ads in woman's magazines contain white people. In young adult magazines, the majority of ads also feature white people, but 25% do feature an Asian

woman as the primary person. African –American magazines feature black people in 100% of their advertisements; this is the only magazine category to do so. Asian people are also featured in general interest magazines, but this only occurs in 3.75% of the ads. Therefore, entire races of people are excluded from advertisements appearing in all magazine categories. Though it seems reasonable that only African Americans are featured in that magazine category, black individuals are completely missing from antidepressant advertisements in every other magazine category. In addition, Asian females reading Women's magazines would fail to see any people of their own race in this magazine category.

SUBTLE MESSAGING TECHNIQUES

The last aspect of subtle messaging techniques I analyzed is the demeanor and social depiction of people in the advertisements. Of the 44.18% of the advertisements that contained people, there are three different methods of portraying them. No one technique is used substantially more than any other. The first method is to show the "primary person" in the grips of depression- alone and sad. This occurred in a total of 12.57% of the advertisements. The second is to feature the "primary person" in an elevated mood, happy and smiling. This occurs in a total of 55.69% of the ads. It can be inferred that this person is in a positive mood due to the antidepressant medication. This individual can be featured alone (23.35%) or with others (32.34%). The last method is to show a set of before and after pictures. This means that the ad will first show someone sad and alone suffering from the symptoms of depression. Then, it will show a transformation where the person after medication becomes happy, smiling, and sociable (Figure 6). This method is utilized in 31.74% of the ads.

B. Analysis

1. Causes of Depression

One of the major benefits of DTC advertising is to increase awareness about diseases and treatment options. Therefore, one goal of the ads is to educate readers about depression, specifically regarding the causes of this disease. A true statement is that the cause of depression is unknown. However, I hypothesized that the majority of ads would claim that depression is real illness with real causes and utilize a biochemical approach. By doing so, people will feel less stigmatized and more likely to seek help for depression if it is framed as a medical condition as opposed to a personal one.

In general, this was supported in my analysis. Although a few ads do not mention anything regarding the causes of depression, 91.79% of all advertisements seen by consumers contain such statements. This is good news for the consumer. It can be said that the majority of the ads are educating readers regarding the causes of depression. However, there are major disparities by brand; only four brands state anything about causes in their ads. The three brands with the most unique ads (Effexors, Prozac, and Zoloft) all mentioned biochemical/medical causes in a majority of their advertisements. A total of 37.57% of all ads specifically state that the cause is related to a chemical imbalance. There were no substantial differences in the way causes were mentioned depending on magazine category. In every group of magazine, the cause mentioned with highest frequency was that depression could be caused by a chemical imbalance. However, there is one exception where my prediction does not apply. Though every brand but one did not mention personal causes of depression, Prozac did so in every one of their unique ads. Therefore, they simultaneously utilize the biochemical and psych-

social theories of depression. Therefore, 20% of all ads that are reaching the consumer mention personal causes.

If the truest statement regarding causes is that it is unknown, Zoloft is the only brand to make it. But since Zoloft had the greatest number of ad appearances, about a quarter of the ads reaching the consumer contain this statement. Zoloft is also the only brand to make any statement about PMDD. Therefore, it seems that Zoloft is the brand providing the most information about the causes of depression to the reader.

2. Self-Diagnosis

All brands mention the symptoms of depression but with varying frequencies. Every brand mentions psychological symptoms and nearly every brand mentions physical and depressive symptoms. It seems that there is not one symptom or category of symptoms mentioned more by one brand or appearing much more frequently in any magazine. The two symptoms that are mentioned most often are fatigue/low energy and depression sadness. It can be inferred that the types of symptoms mentioned in the advertisements does not contribute to self-diagnosis. Furthermore, neither does the format that the symptoms are presented in. Though it can be argued that a checklist or questionnaire would facilitate self-diagnosis, this is only done by Zoloft and Effexor in 17.20% of the total advertisements. This is not utilized with remarkable frequency and therefore cannot be said to ultimately lead to self-diagnosis.

However, there is one element of the advertisements that occurs with significant frequency and could contribute to self-diagnosis. The providing of a phone number or website, required after 1997, is utilized by every brand in nearly every advertisement.

On the other hand, offering free information or a booklet is only used by Prozac and Zoloft in 2.12% of the ads. Therefore, this method is rarely used and does not contribute substantially to consumer information about the disease effect. One aspect I examined that would facilitate the doctor-patient relationship is the statement to ask, notify, or see one's doctor. This is used by every brand in every ad but one. This is positive because it motivates some people to discuss depression with their doctor when they might otherwise not do so. However, it is also negative if it compels patients to unnecessarily request a drug and cause rises in prescribing rates when it may not be needed.

3. Benefits and Risks

Some argue that antidepressant ads privilege benefits over risks and do not do an adequate job of presenting the fair balance between the two as required by the FDA. This hypothesis was not well supported by the data. On one hand, every brand mentions a higher number of risks over benefits in their advertisements. Both the benefits and risks differ by brand, perhaps relating to their respective pharmacology. Zoloft is the only brand to claim that it treats both Post Traumatic Stress Syndrome and Pre Menstrual Dysphonic Disorder. Most of the risks mentioned by all brands are gastrointestinal or sleep related.

On the other hand, the most frequent benefit mentioned is that there is a low occurrence of side effects, that they are not usually serious, and that they are well tolerated. Therefore, although these ads mention a substantial number of risks, most of them minimize the severity of them. Furthermore, advertisements appearing in African

American magazines leave out a number of risks that are mentioned in every other magazine category such as dizziness/lightheadedness, and weight changes.

4. Type of appeal used in the advertisement

There are two main arguments regarding the appeal of antidepressant advertisements. The first is that these ads frame depression as a female condition. Though it is true that statistics show that females are diagnosed at a much higher rate than males, it is potentially dangerous to completely ignore a segment of the population where a certain percent suffer from this disease. Antidepressant ads may perpetuate the over-diagnosis of females and under-diagnosis of males. My results provide strong evidence to support this hypothesis. Of all the ads that include people (about half, Prozac is the only brand that never includes people), 93.41% feature a woman as the primary sufferer of depression. There are only two unique advertisements by Wellbutrin that equally portray a woman and a man. Furthermore, 93.41% of the time this primary person is Caucasian. In only 4.19% of the ads is the person Asian and in a mere 2.39% is the person African-American; these ads are only for the brand Zoloft. This means that every other brand in almost every ad features a white, adult, female as the typical sufferer of depression in need of medication. The ads featuring African-Americans are the only ads that appear in African-American magazines. Woman's magazines feature only the advertisements portraying white people. The ads featuring an Asian woman appear in only Young Adult and General Interest magazine. This trend is a clear demonstration of target marketing on behalf of the manufacturers.

The other argument is that in order to adequately educate the consumer, the ads should be informative and include factual data as opposed to an emotional appeal that uses vague and qualitative terms. I found some support for this hypothesis in my data. Though the brands use a variety of appeals, they are mostly motivational, anecdotal, or emotional. Only Zoloft ads use factual data in the form of diagrams portraying the chemicals relating to depression. However, because Zoloft has the greatest number of ads appearances, on the frequency level the ad appeal seen most frequently is informative. This is seen in 36.77% of the advertisements.

VI. CONCLUSIONS, POLICY IMPLICATIONS & RECCOMENDATIONS

Undoubtedly, DTC advertising both informs and persuades. However, to what extent? There are several reasons to believe that DTC advertising improves the prescription drug market. It provides important medical information to the consumer and requires them to take the initiative in seeking medical advice. In this sense, DTC advertising helps the large number of people who are potentially un-diagnosed and therefore, not treated. This is especially the case for the serious medical condition of depression. This all goes to the idea of consumer empowerment; letting the public know what is available (Calfee, 2001). However, this is only the case when the information provided is not misleading or unbalanced.

As David Healy argued in his novel The Antidepressant Era, the popularity of antidepressants may have been influenced more by pharmaceutical marketing rather than by medical necessity. As the marketing of antidepressants have increased so have the cases of diagnosed depression and other related disorders. It is possible that these

advertisements are in some way encouraging people to ignore the social or personal triggers for their depression and instead focus their attention on chemical manifestations and pharmacological solutions. The problem is further exacerbated when the advertising targets such a small segment of the population; specifically white adult females. Similar to what Grow et al found in their study, my results prove that these ads frame depression as a female condition. My results are even more startling than Grow et al's study, in that the advertisements in my study came not only from *Reader's Digest* and *Time* magazines but magazines encompassing much larger circulation. As Stimson argued in his article, this targeting practice clearly sends out the message that women are more likely than men to be candidates for these drugs.

DTC advertising operates in interplay among the medical profession, the pharmaceutical industry, the regulatory apparatus, and the larger culture in which we live (Healy, 1997). Over time, more drug companies have started using a DTC advertising approach. Therefore, the issues surrounding such advertising and the possible need for greater government regulation are relevant not only to physicians and pharmaceutical companies but also to the general public. If the role of DTC advertising is to educate, the relevant issue is the reliability of this source of information As Bill Frist, Senate Majority Leader, stated, "We must ask ourselves: 'Are these ads, which we know are costing billions, properly educating patients or just peddling expensive products?" (Thomaselli, 2005). Most of the ads adequately educate consumers about the causes of depression, but there seems to be no consensus between brands. Therefore, the actual messages received by consumers, specifically regarding causes, may be somewhat conflicting. If some brands emphasize biochemical causes while others stress personal

causes, the consumer may become confused and hence make these efforts by the manufacturers pointless.

I believe that the public must be adequately informed and educated not only on the causes of depression but also on the symptoms, and both benefits and risks of treatment. This should be the case not only for depression but for other mental health disorders. The prioritizing of benefits over risks is a serious issue raised by this study. Though the actual number of benefits listed did not usually outweigh the number of risks mentioned, it was generally indicated that these side-effects occurred infrequently. Most of these ads use vague, qualitative terms to describe benefits, side-effects, and symptoms of depression. The lack of data and statistics allows for interpretation by the consumer and can make it easier to ignore the risks and readily accept the benefits. This can be potentially dangerous for the patient. A study in the archives of General Psychiatry suggest that as many as 8 million Americans diagnosed as clinically depressed may just be reacting normally to stressful events like losing a job, the loss of a loved one, or a divorce.

Undoubtedly, the main goal of advertising has always been to increase sales. Consumers must be aware of pharmaceutical manufacturer's tactics and be well informed in order to make the smartest decisions for their health and well-being. In addition, the FDA must analyze their regulatory approach so that the flow of information through advertising is as educational and useful as possible. Any standards regarding more complete information would be beneficial to physicians and to the public. The most realistic recommendation is that the FDA should require approval of these ads before

they reach the public. Simply requiring that an advertisement "cannot be false or misleading" and "must present information that is not inconsistent with the product label" is not enough; misleading content undoubtedly reaches the consumer. It is necessary for the FDA to compare antidepressant advertisements to scientific evidence to ensure that the messages received by potential patients are 100% accurate. The issue for policy makers is not whether DTC advertising should be banned, but instead how to maximize the benefits and minimize the risks. Currently there are two policy initiatives that seem promising. One includes a two-year moratorium on DTC advertising of new drugs combined with a requirement for systematic postmarketing surveillance. The other is to use the tax system to create incentives for public-private consortia to produce mass media campaigns aimed at educating patients about common but serious medical conditions. Either way, the main goal of any policy initiative should be to harness of the power of DTC advertising to improve public health.

Appendix 1: Code of Federal Regulations - Title 21 Food and Drugs

PART 202—PRESCRIPTION DRUG ADVERTISING

Authority:

21 U.S.C. 321, 331, 352, 355, 360b, 371.

§202.1 Prescription-drug advertisements.

(a)(1) The ingredient information required by section 502(n) of the Federal Food, Drug, and Cosmetic Act shall appear together, without any intervening written, printed, or graphic matter, except the proprietary names of ingredients, which may be included with the listing of established names.

(2) The order of listing of ingredients in the advertisement shall be the same as the order of listing of ingredients on the label of the product, and the information presented in the advertisement concerning the quantity of each such ingredient shall be the same as the corresponding information on the label of the product.

(3) The advertisement shall not employ a fanciful proprietary name for the drug or any ingredient in such a manner as to imply that the drug or ingredient has some unique effectiveness or composition, when, in fact, the drug or ingredient is a common substance, the limitations of which are readily recognized when the drug or ingredient is listed by its established name.

(4) The advertisement shall not feature inert or inactive ingredients in a manner that creates an impression of value greater than their true functional role in the formulation.

(5) The advertisement shall not designate a drug or ingredient by a proprietary name that, because of similarity in spelling or pronunciation, may be confused with the proprietary name or the established name of a different drug or ingredient.

(b)(1) If an advertisement for a prescription drug bears a proprietary name or designation for the drug or any ingredient thereof, the established name, if such there be, corresponding to such proprietary name or designation shall accompany such proprietary name or designation each time it is featured in the advertisement for the drug; but, except as provided below in this subparagraph, the established name need not be used with the proprietary name or designation in the running text of the advertisement. On any page of an advertisement in which the proprietary name or designation is not featured but is used in the running text, the established name shall be used at least once in the running text in association with such proprietary name or designation and in the same type size used in the running text: *Provided, however,* That if the proprietary name or designation is used in the running text in larger size type, the established name shall be used at least once in association with, and in type at least half as large as the type used for, the most prominent presentation of the proprietary name or designation in such running text. If any

advertisement includes a column with running text containing detailed information as to composition, prescribing, side effects, or contraindications and the proprietary name or designation is used in such column but is not featured above or below the column, the established name shall be used at least once in such column of running text in association with such proprietary name or designation and in the same type size used in such column of running text: *Provided, however,* That if the proprietary name or designation is used in such column of running text in larger size type, the established name shall be used at least once in association with, and in type at least half as large as the type used for, the most prominent presentation of the proprietary name or designation in such column of running text. Where the established name is required to accompany or to be used in association with the proprietary name or designation, the established name shall be placed in direct conjunction with the proprietary name or designation, and the relationship between the proprietary name or designation and the established name shall be made clear by use of a phrase such as "brand of" preceding the established name, by brackets surrounding the established name, or by other suitable means.

(2) The established name shall be printed in letters that are at least half as large as the letters comprising the proprietary name or designation with which it is joined, and the established name shall have a prominence commensurate with the prominence with which such proprietary name or designation appears, taking into account all pertinent factors, including typography, layout, contrast, and other printing features.

(c) In the case of a prescription drug containing two or more active ingredients, if the advertisement bears a proprietary name or designation for such mixture and there is no established name corresponding to such proprietary name or designation, the quantitative ingredient information required in the advertisement by section 502(n) of the act shall be placed in direct conjunction with the most prominent display of the proprietary name or designation. The prominence of the quantitative ingredient information shall bear a reasonable relationship to the prominence of the proprietary name.

(d)(1) If the advertisement employs one proprietary name or designation to refer to a combination of active ingredients present in more than one preparation (the individual preparations differing from each other as to quantities of active ingredients and/or the form of the finished preparation) and there is no established name corresponding to such proprietary name or designation, a listing showing the established names of the active ingredients shall be placed in direct conjunction with the most prominent display of such proprietary name or designation. The prominence of this listing of active ingredients shall bear a reasonable relationship to the prominence of the proprietary name and the relationship between such proprietary name or designation, and the listing of active ingredients shall be made clear by use of such phrase as "brand of", preceding the listing of active ingredients.

(2) The advertisement shall prominently display the name of at least one specific dosage form and shall have the quantitative ingredient information required by section 502(n) of the act in direct conjunction with such display. If other dosage forms are listed in the advertisement, the quantitative ingredient information for such dosage forms shall appear

in direct conjunction and in equal prominence with the most prominent listing of the names of such dosage forms.

(e) True statement of information in brief summary relating to side effects, contraindications, and effectiveness:

(1) *When required.* All advertisements for any prescription drug ("prescription drug" as used in this section means drugs defined in section 503(b)(1) of the act and §201.105, applicable to drugs for use by man and veterinary drugs, respectively), except advertisements described in paragraph (e)(2) of this section, shall present a true statement of information in brief summary relating to side effects, contraindications (when used in this section "side effects, contraindications" include side effects, warnings, precautions, and contraindications and include any such information under such headings as cautions, special considerations, important notes, etc.) and effectiveness. Advertisements broadcast through media such as radio, television, or telephone communications systems shall include information relating to the major side effects and contraindications of the advertised drugs in the audio or audio and visual parts of the presentation and unless adequate provision is made for dissemination of the approved or permitted package labeling in connection with the broadcast presentation shall contain a brief summary of all necessary information related to side effects and contraindications.

(2) *Exempt advertisements.* The following advertisements are exempt from the requirements of paragraph (e)(1) of this section under the conditions specified:

(i) *Reminder advertisements.* Reminder advertisements are those which call attention to the name of the drug product but do not include indications or dosage recommendations for use of the drug product. These reminder advertisements shall contain only the proprietary name of the drug product, if any; the established name of the drug product, if any; the established name of each active ingredient in the drug product; and, optionally, information relating to quantitative ingredient statements, dosage form, quantity of package contents, price, the name and address of the manufacturer, packer, or distributor or other written, printed, or graphic matter containing no representation or suggestion relating to the advertised drug product. If the Commissioner finds that there is evidence of significant incidence of fatalities or serious injury associated with the use of a particular prescription drug, he may withdraw this exemption by so notifying the manufacturer, packer, or distributor of the drug by letter. Reminder advertisements, other than those solely intended to convey price information including, but not limited to, those subject to the requirements of §200.200 of this chapter, are not permitted for a prescription drug product whose labeling contains a boxed warning relating to a serious hazard associated with the use of the drug product. Reminder advertisements which are intended to provide consumers with information concerning the price charged for a prescription for a drug product are exempt from the requirements of this section if they meet all of the conditions contained in §200.200 of this chapter. Reminder advertisements, other than those subject to the requirements of §200.200 of this chapter, are not permitted for a drug for which an announcement has been published pursuant to a review on the labeling claims for the drug by the National Academy of Sciences/National

Research Council (NAS/NRC), Drug Efficacy Study Group, and for which no claim has been evaluated as higher than "possibly effective." If the Commissioner finds the circumstances are such that a reminder advertisement may be misleading to prescribers of drugs subject to NAS/NRC evaluation, such advertisements will not be allowed and the manufacturer, packer, or distributor will be notified either in the publication of the conclusions on the effectiveness of the drug or by letter.

(ii) *Advertisements of bulk-sale drugs.* Advertisements of bulk-sale drugs that promote sale of the drug in bulk packages in accordance with the practice of the trade solely to be processed, manufactured, labeled, or repackaged in substantial quantities and that contain no claims for the therapeutic safety or effectiveness of the drug.

(iii) *Advertisements of prescription-compounding drugs.* Advertisements of prescription-compounding drugs that promote sale of a drug for use as a prescription chemical or other compound for use by registered pharmacists in compounding prescriptions if the drug otherwise complies with the conditions for the labeling exemption contained in §201.120 and the advertisement contains no claims for the therapeutic safety or effectiveness of the drug.

(3) *Scope of information to be included; applicability to the entire advertisement.* (i) The requirement of a true statement of information relating to side effects, contraindications, and effectiveness applies to the entire advertisement. Untrue or misleading information in any part of the advertisement will not be corrected by the inclusion in another distinct part of the advertisement of a brief statement containing true information relating to side effects, contraindications, and effectiveness of the drug. If any part or theme of the advertisement would make the advertisement false or misleading by reason of the omission of appropriate qualification or pertinent information, that part or theme shall include the appropriate qualification or pertinent information, which may be concise if it is supplemented by a prominent reference on each page to the presence and location elsewhere in the advertisement of a more complete discussion of such qualification or information.

(ii) The information relating to effectiveness is not required to include information relating to all purposes for which the drug is intended but may optionally be limited to a true statement of the effectiveness of the drug for the selected purpose(s) for which the drug is recommended or suggested in the advertisement. The information relating to effectiveness shall include specific indications for use of the drug for purposes claimed in the advertisement; for example, when an advertisement contains a broad claim that a drug is an antibacterial agent, the advertisement shall name a type or types of infections and microorganisms for which the drug is effective clinically as specifically as required, approved, or permitted in the drug package labeling.

(iii) The information relating to side effects and contraindications shall disclose each specific side effect and contraindication (which include side effects, warnings, precautions, and contraindications and include any such information under such headings as cautions, special considerations, important notes, etc.; see paragraph (e)(1) of this

section) contained in required, approved, or permitted labeling for the advertised drug dosage form(s): *Provided, however,*

(*a*) The side effects and contraindications disclosed may be limited to those pertinent to the indications for which the drug is recommended or suggested in the advertisement to the extent that such limited disclosure has previously been approved or permitted in drug labeling conforming to the provisions of §§201.100 or 201.105; and

(*b*) The use of a single term for a group of side effects and contraindications (for example, "blood dyscrasias" for disclosure of "leukopenia," "agranulocytosis," and "neutropenia") is permitted only to the extent that the use of such a single term in place of disclosure of each specific side effect and contraindication has been previously approved or permitted in drug labeling conforming to the provisions of §§201.100 or 201.105.

(4) *Substance of information to be included in brief summary.* (i)(*a*) An advertisement for a prescription drug covered by a new-drug application approved pursuant to section 505 of the act after October 10, 1962 or section 512 of the act after August 1, 1969, or any approved supplement thereto, shall not recommend or suggest any use that is not in the labeling accepted in such approved new-drug application or supplement. The advertisement shall present information from labeling required, approved, or permitted in a new-drug application relating to each specific side effect and contraindication in such labeling that relates to the uses of the advertised drug dosage form(s) or shall otherwise conform to the provisions of paragraph (e)(3)(iii) of this section.

(*b*) If a prescription drug was covered by a new-drug application or a supplement thereto that became effective prior to October 10, 1962, an advertisement may recommend or suggest:

(*1*) Uses contained in the labeling accepted in such new-drug application and any effective, approved, or permitted supplement thereto.

(*2*) Additional uses contained in labeling in commercial use on October 9, 1962, to the extent that such uses did not cause the drug to be an unapproved "new drug" as "new drug" was defined in section 201(p) of the act as then in force, and to the extent that such uses would be permitted were the drug subject to paragraph (e)(4)(iii) of this section.

(*3*) Additional uses contained in labeling in current commercial use to the extent that such uses do not cause the drug to be an unapproved "new drug" as defined in section 201(p) of the act as amended or a "new animal drug" as defined in section 201(v) of the act as amended.

The advertisement shall present information from labeling required, approved, or permitted in a new-drug application relating to each specific side effect and contraindication in such labeling that relates to the uses of the advertised drug dosage

form(s) or shall otherwise conform to the provisions of paragraph (e)(3)(iii) of this section.

(ii) In the case of an advertisement for a prescription drug other than a drug the labeling of which causes it to be an unapproved "new drug" and other than drugs covered by paragraph (e)(4)(i) of this section, an advertisement may recommend and suggest the drug only for those uses contained in the labeling thereof:

(*a*) For which the drug is generally recognized as safe and effective among experts qualified by scientific training and experience to evaluate the safety and effectiveness of such drugs; or

(*b*) For which there exists substantial evidence of safety and effectiveness, consisting of adequate and well-controlled investigations, including clinical investigations (as used in this section "clinical investigations," "clinical experience," and "clinical significance" mean in the case of drugs intended for administration to man, investigations, experience, or significance in humans, and in the case of drugs intended for administration to other animals, investigations, experience, or significance in the specie or species for which the drug is advertised), by experts qualified by scientific training and experience to evaluate the safety and effectiveness of the drug involved, on the basis of which it can fairly and responsibly be concluded by such experts that the drug is safe and effective for such uses; or

(*c*) For which there exists substantial clinical experience (as used in this section this means substantial clinical experience adequately documented in medical literature or by other data (to be supplied to the Food and Drug Administration, if requested)), on the basis of which it can fairly and responsibly be concluded by qualified experts that the drug is safe and effective for such uses; or

(*d*) For which safety is supported under any of the preceding clauses in paragraphs (e)(4)(iii) (*a*), (*b*), and (*c*) of this section and effectiveness is supported under any other of such clauses.

The advertisement shall present information relating to each specific side effect and contraindication that is required, approved, or permitted in the package labeling by §§201.100 or 201.105 of this chapter of the drug dosage form(s) or shall otherwise conform to the provisions of paragraph (e)(3)(iii) of this section.

(5) *"True statement" of information.* An advertisement does not satisfy the requirement that it present a "true statement" of information in brief summary relating to side effects, contraindications, and effectiveness if:

(i) It is false or misleading with respect to side effects, contraindications, or effectiveness; or

(ii) It fails to present a fair balance between information relating to side effects and contraindications and information relating to effectiveness of the drug in that the information relating to effectiveness is presented in greater scope, depth, or detail than is required by section 502(n) of the act and this information is not fairly balanced by a presentation of a summary of true information relating to side effects and contraindications of the drug; *Provided, however,* That no advertisement shall be considered to be in violation of this section if the presentation of true information relating to side effects and contraindications is comparable in depth and detail with the claims for effectiveness or safety.

(iii) It fails to reveal facts material in the light of its representations or material with respect to consequences that may result from the use of the drug as recommended or suggested in the advertisement.

(6) *Advertisements that are false, lacking in fair balance, or otherwise misleading.* An advertisement for a prescription drug is false, lacking in fair balance, or otherwise misleading, or otherwise violative of section 502(n) of the act, among other reasons, if it:

(i) Contains a representation or suggestion, not approved or permitted for use in the labeling, that a drug is better, more effective, useful in a broader range of conditions or patients (as used in this section *patients* means humans and in the case of veterinary drugs, other animals), safer, has fewer, or less incidence of, or less serious side effects or contraindications than has been demonstrated by substantial evidence or substantial clinical experience (as described in paragraphs (e)(4)(ii) (*b*) and (*c*) of this section) whether or not such representations are made by comparison with other drugs or treatments, and whether or not such a representation or suggestion is made directly or through use of published or unpublished literature, quotations, or other references.

(ii) Contains a drug comparison that represents or suggests that a drug is safer or more effective than another drug in some particular when it has not been demonstrated to be safer or more effective in such particular by substantial evidence or substantial clinical experience.

(iii) Contains favorable information or opinions about a drug previously regarded as valid but which have been rendered invalid by contrary and more credible recent information, or contains literature references or quotations that are significantly more favorable to the drug than has been demonstrated by substantial evidence or substantial clinical experience.

(iv) Contains a representation or suggestion that a drug is safer than it has been demonstrated to be by substantial evidence or substantial clinical experience, by selective presentation of information from published articles or other references that report no side effects or minimal side effects with the drug or otherwise selects information from any source in a way that makes a drug appear to be safer than has been demonstrated.

(v) Presents information from a study in a way that implies that the study represents larger or more general experience with the drug than it actually does.

(vi) Contains references to literature or studies that misrepresent the effectiveness of a drug by failure to disclose that claimed results may be due to concomitant therapy, or by failure to disclose the credible information available concerning the extent to which claimed results may be due to placebo effect (information concerning placebo effect is not required unless the advertisement promotes the drug for use by man).

(vii) Contains favorable data or conclusions from nonclinical studies of a drug, such as in laboratory animals or in vitro, in a way that suggests they have clinical significance when in fact no such clinical significance has been demonstrated.

(viii) Uses a statement by a recognized authority that is apparently favorable about a drug but fails to refer to concurrent or more recent unfavorable data or statements from the same authority on the same subject or subjects.

(ix) Uses a quote or paraphrase out of context to convey a false or misleading idea.

(x) Uses literature, quotations, or references that purport to support an advertising claim but in fact do not support the claim or have relevance to the claim.

(xi) Uses literature, quotations, or references for the purpose of recommending or suggesting conditions of drug use that are not approved or permitted in the drug package labeling.

(xii) Offers a combination of drugs for the treatment of patients suffering from a condition amenable to treatment by any of the components rather than limiting the indications for use to patients for whom concomitant therapy as provided by the fixed combination drug is indicated, unless such condition is included in the uses permitted under paragraph (e)(4) of this section.

(xiii) Uses a study on normal individuals without disclosing that the subjects were normal, unless the drug is intended for use on normal individuals.

(xiv) Uses “statistics” on numbers of patients, or counts of favorable results or side effects, derived from pooling data from various insignificant or dissimilar studies in a way that suggests either that such “statistics” are valid if they are not or that they are derived from large or significant studies supporting favorable conclusions when such is not the case.

(xv) Uses erroneously a statistical finding of “no significant difference” to claim clinical equivalence or to deny or conceal the potential existence of a real clinical difference.

(xvi) Uses statements or representations that a drug differs from or does not contain a named drug or category of drugs, or that it has a greater potency per unit of weight, in a

way that suggests falsely or misleadingly or without substantial evidence or substantial clinical experience that the advertised drug is safer or more effective than such other drug or drugs.

(xvii) Uses data favorable to a drug derived from patients treated with dosages different from those recommended in approved or permitted labeling if the drug advertised is subject to section 505 of the act, or, in the case of other drugs, if the dosages employed were different from those recommended in the labeling and generally recognized as safe and effective. This provision is not intended to prevent citation of reports of studies that include some patients treated with dosages different from those authorized, if the results in such patients are not used.

(xviii) Uses headline, subheadline, or pictorial or other graphic matter in a way that is misleading.

(xix) Represents or suggests that drug dosages properly recommended for use in the treatment of certain classes of patients or disease conditions are safe and effective for the treatment of other classes of patients or disease conditions when such is not the case.

(xx) Presents required information relating to side effects or contraindications by means of a general term for a group in place of disclosing each specific side effect and contraindication (for example employs the term *blood dyscrasias* instead of "leukopenia," "agranulocytosis," "neutropenia," etc.) unless the use of such general term conforms to the provisions of paragraph (e)(3)(iii) of this section.

Provided, however, That any provision of this paragraph shall be waived with respect to a specified advertisement as set forth in a written communication from the Food and Drug Administration on a petition for such a waiver from a person who would be adversely affected by the enforcement of such provision on the basis of a showing that the advertisement is not false, lacking in fair balance, or otherwise misleading, or otherwise violative of section 502(n) of the act. A petition for such a waiver shall set forth clearly and concisely the petitioner's interest in the advertisement, the specific provision of this paragraph from which a waiver is sought, a complete copy of the advertisement, and a showing that the advertisement is not false, lacking in fair balance, or otherwise misleading, or otherwise violative of section 502(n) of the act.

(7) *Advertisements that may be false, lacking in fair balance, or otherwise misleading.* An advertisement may be false, lacking in fair balance, or otherwise misleading or otherwise violative of section 502(n) of the act if it:

(i) Contains favorable information or conclusions from a study that is inadequate in design, scope, or conduct to furnish significant support for such information or conclusions.

(ii) Uses the concept of "statistical significance" to support a claim that has not been demonstrated to have clinical significance or validity, or fails to reveal the range of variations around the quoted average results.

(iii) Uses statistical analyses and techniques on a retrospective basis to discover and cite findings not soundly supported by the study, or to suggest scientific validity and rigor for data from studies the design or protocol of which are not amenable to formal statistical evaluations.

(iv) Uses tables or graphs to distort or misrepresent the relationships, trends, differences, or changes among the variables or products studied; for example, by failing to label abscissa and ordinate so that the graph creates a misleading impression.

(v) Uses reports or statements represented to be statistical analyses, interpretations, or evaluations that are inconsistent with or violate the established principles of statistical theory, methodology, applied practice, and inference, or that are derived from clinical studies the design, data, or conduct of which substantially invalidate the application of statistical analyses, interpretations, or evaluations.

(vi) Contains claims concerning the mechanism or site of drug action that are not generally regarded as established by scientific evidence by experts qualified by scientific training and experience without disclosing that the claims are not established and the limitations of the supporting evidence.

(vii) Fails to provide sufficient emphasis for the information relating to side effects and contraindications, when such information is contained in a distinct part of an advertisement, because of repetition or other emphasis in that part of the advertisement of claims for effectiveness or safety of the drug.

(viii) Fails to present information relating to side effects and contraindications with a prominence and readability reasonably comparable with the presentation of information relating to effectiveness of the drug, taking into account all implementing factors such as typography, layout, contrast, headlines, paragraphing, white space, and any other techniques apt to achieve emphasis.

(ix) Fails to provide adequate emphasis (for example, by the use of color scheme, borders, headlines, or copy that extends across the gutter) for the fact that two facing pages are part of the same advertisement when one page contains information relating to side effects and contraindications.

(x) In an advertisement promoting use of the drug in a selected class of patients (for example, geriatric patients or depressed patients), fails to present with adequate emphasis the significant side effects and contraindications or the significant dosage considerations, when dosage recommendations are included in an advertisement, especially applicable to that selected class of patients.

(xi) Fails to present on a page facing another page (or on another full page) of an advertisement on more than one page, information relating to side effects and contraindications when such information is in a distinct part of the advertisement.

(xii) Fails to include on each page or spread of an advertisement the information relating to side effects and contraindications or a prominent reference to its presence and location when it is presented as a distinct part of an advertisement.

(xiii) Contains information from published or unpublished reports or opinions falsely or misleadingly represented or suggested to be authentic or authoritative.

(f)–(i) [Reserved]

(j)(1) No advertisement concerning a particular prescription drug may be disseminated without prior approval by the Food and Drug Administration if:

(i) The sponsor or the Food and Drug Administration has received information that has not been widely publicized in medical literature that the use of the drug may cause fatalities or serious damage;

(ii) The Commissioner (or in his absence the officer acting as Commissioner), after evaluating the reliability of such information, has notified the sponsor that the information must be a part of the advertisements for the drug; and

(iii) The sponsor has failed within a reasonable time as specified in such notification to present to the Food and Drug Administration a program, adequate in light of the nature of the information, for assuring that such information will be publicized promptly and adequately to the medical profession in subsequent advertisements.

If the Commissioner finds that the program presented is not being followed, he will notify the sponsor that prior approval of all advertisements for the particular drug will be required. Nothing in this paragraph is to be construed as limiting the Commissioner's or the Secretary's rights, as authorized by law, to issue publicity, to suspend any new-drug application, to decertify any antibiotic, or to recommend any regulatory action.

(2) Within a reasonable time after information concerning the possibility that a drug may cause fatalities or serious damage has been widely publicized in medical literature, the Food and Drug Administration shall notify the sponsor of the drug by mail that prior approval of advertisements for the drug is no longer necessary.

(3) Dissemination of an advertisement not in compliance with this paragraph shall be deemed to be an act that causes the drug to be misbranded under section 502(n) of the act.

(4) Any advertisement may be submitted to the Food and Drug Administration prior to publication for comment. If the advertiser is notified that the submitted advertisement is not in violation and, at some subsequent time, the Food and Drug Administration changes

its opinion, the advertiser will be so notified and will be given a reasonable time for correction before any regulatory action is taken under this section. Notification to the advertiser that a proposed advertisement is or is not considered to be in violation shall be in written form.

(5) The sponsor shall have an opportunity for a regulatory hearing before the Food and Drug Administration pursuant to part 16 of this chapter with respect to any determination that prior approval is required for advertisements concerning a particular prescription drug, or that a particular advertisement is not approvable.

(k) An advertisement issued or caused to be issued by the manufacturer, packer, or distributor of the drug promoted by the advertisement and which is not in compliance with section 502(n) of the act and the applicable regulations thereunder shall cause stocks of such drug in possession of the person responsible for issuing or causing the issuance of the advertisement, and stocks of the drug distributed by such person and still in the channels of commerce, to be misbranded under section 502(n) of the act.

(l)(1) Advertisements subject to section 502(n) of the act include advertisements in published journals, magazines, other periodicals, and newspapers, and advertisements broadcast through media such as radio, television, and telephone communication systems.

(2) Brochures, booklets, mailing pieces, detailing pieces, file cards, bulletins, calendars, price lists, catalogs, house organs, letters, motion picture films, film strips, lantern slides, sound recordings, exhibits, literature, and reprints and similar pieces of printed, audio, or visual matter descriptive of a drug and references published (for example, the "Physicians Desk Reference") for use by medical practitioners, pharmacists, or nurses, containing drug information supplied by the manufacturer, packer, or distributor of the drug and which are disseminated by or on behalf of its manufacturer, packer, or distributor are hereby determined to be labeling as defined in section 201(m) of the act.

[40 FR 14016, Mar. 27, 1975, as amended at 40 FR 58799, Dec. 18, 1975; 41 FR 48266, Nov. 2, 1976; 42 FR 15674, Mar. 22, 1977; 60 FR 38480, July 27, 1995; 64 FR 400, Jan. 5, 1999]

Effective Date Note:

At 44 FR 37467, June 26, 1979, §202.1(e)(6) (ii) and (vii) were revised. At 44 FR 74817, Dec. 18, 1979, paragraphs (e)(6) (ii) and (vii) were stayed indefinitely. At 64 FR 400, Jan. 5, 1999, these paragraphs were amended. For the convenience of the user, paragraphs (e)(6) (ii) and (vii), published at 44 FR 37467, are set forth below:

§202.1 Prescription–drug advertisements.

(ii) Represents or suggests that a prescription drug is safer or more effective than another drug in some particular when the difference has not been demonstrated by substantial evidence. An advertisement for a prescription drug may not, either directly or by

implication, e.g., by use of comparative test data or reference to published reports, represent that the drug is safer or more effective than another drug, nor may an advertisement contain a quantitative statement of safety or effectiveness (*a*) unless the representation has been approved as part of the labeling in a new drug application or biologic license, or (*b*) if the drug is not a new drug or biologic, unless the representation of safety or effectiveness is supported by substantial evidence derived from adequate and well–controlled studies as defined in §314.111(a)(5)(ii) of this chapter, or unless the requirement for adequate and well–controlled studies is waived as provided in §314.111(a)(5)(ii) of this chapter.

(vii) Suggests, on the basis of favorable data or conclusions from nonclinical studies of a prescription drug, such as studies in laboratory animals or in vitro, that the studies have clinical significance, if clinical significance has not been demonstrated. Data that demonstrate activity or effectiveness for a prescription drug in animal or in vitro tests and have not been shown by adequate and well–controlled clinical studies to pertain to clinical use may be used in advertising except that (*a*), in the case of anti–infective drugs, in vitro data may be included in the advertisement, if data are immediately preceded by the statement "The following in vitro data are available but their clinical significance is unknown" and (b), in the case of other drug classes, in vitro and animal data that have not been shown to pertain to clinical use by adequate and well–controlled clinical studies as defined in §314.111(a)(5)(ii) of this chapter may not be used unless the requirement for adequate and well–controlled studies is waived as provided in §314.111(a)(5)(ii) of this chapter.

Appendix 2

Pharmaceutical Industry Issues DTC Ad Guidelines:

Softball Approach Rejects Calls for Restrictions or Moratorium

Text of PhRMA Principles

PhRMA Guiding Principles on Direct to Consumer Advertisements About Prescription Medicines

To express the commitment of PhRMA members to deliver DTC communicataions that serve as valuable contributors to public health, PhRMA has established the following voluntary guiding principles.

1. These principles are premised on the recognition that DTC advertising of prescription medicines can benefit the public health by increasing awareness about diseases, educating patients about treatment options, motivating patients to contact their physicians and engage in a dialogue about health concerns, increasing the likelihood that patients will receive appropriate care for conditions that are frequently under-diagnosed and under-treated, and encouraging compliance with prescription drug treatment regimens.

2. In accordance with FDA regulations, all DTC information should be accurate and not misleading, should make claims only when supported by substantial evidence, should reflect balance between risks and benefits, and should be consistent with FDA approved labeling.

3. DTC television and print advertising which is designed to market a prescription drug should also be designed to responsibly educate the consumer about that medicine and, where appropriate, the condition for which it may be prescribed.

4. DTC television and print advertising of prescription drugs should clearly indicate that the medicine is a prescription drug to distinguish such advertising from other advertising for non-prescription products.

5. DTC television and print advertising should foster responsible communications between patients and health care professionals to help patients achieve better health and a more complete appreciation of both the health benefits and the known risks associated with the medicine being advertised.

6. In order to foster responsible communication between patients and health care professionals, companies should spend an appropriate amount of time to educate health professionals about a new medicine or a new therapeutic indication before commencing the first DTC advertising campaign. In determining what constitutes an appropriate time, companies should take into account the relative importance of informing patients of the availability of a new medicine, the complexity of the risk-benefit profile of that new

medicine and health care professionals' knowledge of the condition being treated. Companies should continue to educate health care professionals as additional valid information about a new medicine is obtained from all reliable sources.

7. Working with the FDA, companies should continue to responsibly alter or discontinue a DTC advertising campaign should new and reliable information indicated a serious previously unknown safety risk.

8. Companies should submit all new DTC television advertisements to the FDA before releasing these advertisements for broadcast.

9. DTC television and print advertising should include information about the availability of other options such as diet and lifestyle changes where appropriate for the advertised condition.

10. DTC television advertising that identifies a product by name should clearly state the health conditions for which the medicine is approved and the major risks associated with the medicine being advertised.

11. DTC television and print advertising should be designed to achieve a balance presentation of both the benefits and the risks associated with the advertised prescription medicine.

12. All DTC advertising should respect the seriousness of the health conditions and the medicine being advertised.

13. In terms of content and placement, DTC television and print advertisements should be targeted to avoid audiences that are not age appropriate for the messages involved.

14. Companies are encouraged to promote health and disease awareness as part of their DTC advertising.

15. Companies are encouraged to include information in all DTC advertising, where feasible, about help for the uninsured and underinsured.

** source: Thomaselli, R. (2005, August 2). *Pharmaceutical industry issues DTC ad guidelines: Softball approach rejects calls for restrictions or moratorium.* www.adage.com/paypoints/buyArticle.cms/

Appendix 3

	1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
CELEXA	0	0	0	0	0	0	0	0	0	0	0	0	1	3.33	0	0	0	0	0	0	0	0
SERZONE	0	0	0	0	1	2.56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EFFEXOR & EFFEXOR XR	6	60	8	66.67	0	0	0	0	0	0	0	0	0	0	0	0	26	21.49	6	8.96	0	0
PAXIL CR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	66.67	9	7.44	6	8.96	0	0
PROZAC	0	0	0	0	38	97.44	49	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WELLBUTRIN SR & XL	0	0	1	8.33	0	0	0	0	0	0	0	0	4	13.33	0	0	10	8.26	23	34.33	9	28.13
ZOLOFT	0	0	0	0	0	0	0	0	0	0	0	0	25	83.33	6	33.33	76	62.81	32	47.76	23	71.88
TOTAL	**10**	**100**	**12**	**100**	**39**	**100**	**49**	**100**	**0**	**100**	**0**	**100**	**30**	**100**	**18**	**100**	**121**	**100**	**67**	**100**	**32**	**100**

Appendix 4

CODING FORM FOR PSYCHIATRIC MEDICINE/ANTIDEPRESSANTS

UNIQUE AD NUMBER_____
BRAND NUMBER _____

Type of ad □ Advertisement □ Other_____
(*check all that apply*) □ Preview Ad
Sponsors_____

Ad Length

□1pg		□<.25pg
□2pgs	**and…**	□.25 pg
□3pgs		□.5pg
□4pgs		□.75pg
□>4pgs		

Directive Length

□1pg		□.25pg
□2pgs	**and…**	□.5 pg
□3pgs		□.75pg

Product
_____

Product Type □ Tablet □ Capsule □ Not Specified □ Other_____

□ Dosage not specified

Dosage	_____mg □ n/a	_____mg □ n/a
Frequency	□D □W □M □O_____	□D □W □M □O_____
	□ not specified	□ not specified
	_____mg □ n/a	_____mg □ n/a
	□D □W □M □O_____	□D □W □M □O_____
	□ not specified	□ not specified

Manufacturer
_____
Number _____ □ Unable to be determined

Design of Ad □ Color □ Black & White □ Microfiche

Ad Visual (check all that apply)
□ Picture □ Product □ Text □ chart/quiz/questionnaire

Tagline
_____
Number _____ □ No tagline in ad

Administration □ By prescription only □ Not identified in ad

Directives (check all that apply) □ None
□ Caution if used w/ tricyclic antidepressant (TCA)

□ Tell your doctor about other medications/ other conditions you have.
□ Have blood pressure monitored regularly □ Ask/Notify/See your doctor
□ Ask your sales representative
□ Read important information on next page □ Not approved for pediatric patients
□ Patients should be observed closely for changes in behavior/worsening condition

Do Not Use if…
□ using MAO inhibitors □ using Seldane, Hismanal, Halcion or Propulsid
□ using Bupropion/pimozide/thioridazine □ pregnant/nursing
□ have had seizure or eating disorder
□ Glaucoma □ Renal disease/impairment □ alcohol use
□ hepatic insufficient
□ Allergies to product □ hypersensitive to escitalopram oxalate
□ Under 18 □ stop using alcohol/sedatives
□ Other_____

Side Effects (check all that apply) □ None Specified
□ Dry mouth □ Diarrhea, constipation, upset stomach □ Nausea
□ Drowsiness/sleepiness/yawn □ Insomnia □ Sexual impairment
□ Dizziness/lightheadedness □ Lack of energy/weakness □ Muscle pain
□ Anxiety/nervousness/agitation □ Sweating □ Headaches □ Seizure/tremor
□ Weight changes/anorexia □ Increased blood pressure □ Rash □ Injury/trauma
□ Decreased appetite □ Vision impairment □ Sore throat □ Suicidal Thoughts/actions
□ Infection
□ Other_____

Product Claims (check all that apply) □ None
□ Effective/clinically proven
□ Works to correct chemical imbalance
□ Product has been studied for X length of time
□ Treats Pre Menstrual Dysphonic Disorder
□ Product helps treat Post Traumatic Stress Syndrome
□ Low occurrence of side effects/not usually serious/well tolerated
□ Not associated with weight gain
□ Not habit forming
□ Won't change your personality
□ Convenient
□ Most prescribed/used
□ Rapid Relief
□ Other_____

General information about depression (check all that apply) □ None

General:
□ Depression is a serious medical condition/can interfere with daily functioning
□ Depression affects millions/one of most common illnesses
□ Different treatments may have different results in different people
□ It can be triggered by stressful life, or it can appear suddenly
□ When you're clinically depressed the level of serotonin may drop
□ Depression is a real illness with real causes

□ The cause of depression is unknown
□ Depression could be caused by a chemical imbalance
□ Depression includes both emotional and physical symptoms
□ PMDD is related to hormonal changes and chemicals in your body

Symptoms
□ Everyday life unbearable □ Inability to Concentrate □ Loss of Interest
□ Change in Sleep Patterns □ Change in appetite □ Fatigue/Low energy
□ Thoughts of Death/Suicide □ Depression/Sadness □ Sadness lasts weeks
□ High Stress/Anxiety □ Agitation/irritability □ Restlessness

□ Other_____

Additional Information (check all that apply) □ None
□ No additional information □ Address □ Phone Number
□ Contact system □ Website
□ Other_____

Offerings (check all that apply) □ None
□ Support system/program □ Coupons and discounts □ Self-Test
□ Free/more information or booklet □ Questionnaire

Nature of Ad Appeal *(check all that apply)*
□ Anecdotal/Testimonial □ Humor/Witty □ Popular Appeal
□ Motivational □ Fear-based □ Safety
□ Informative/Statistics & Studies □ Promotional

Superiority Claims □ None
□ *Comparison Product(s)* □ General Comparison
*Which Product:*_____
*Basis of Comparison:*_____ □ FTC Report □ FTC Method □ Either
*Text of claim*_____

People in ad? □ People □ No people
□ Anthropomorphic Character

People in foreground of ad
Person 1 Race □ White □ Black □ Hispanic □ Asian □ Other □ CBI
Gender □ Male □ Female □ CBI
Age □ Child □ Teen □ Adult □ Elder □ CBI
Using Product □ Yes □ No
Celebrity □ Yes_____ □ No
Occupation _____ □ Not specified
Health of Person 1 *(check all that apply)*

Person 2 Race □ White □ Black □ Hispanic □ Asian □ Other □ CBI
Gender □ Male □ Female □ CBI

	Age	□ Child	□ Teen	□ Adult	□ Elder	□ CBI
	Using Product		□ Yes	□ No		
	Celebrity		□ Yes_____		□ No	
	Occupation	_____			□ Not specified	
Person 3	Race	□ White	□ Black	□ Hispanic	□ Asian	□ Other □ CBI
	Gender	□ Male	□ Female			□ CBI
	Age	□ Child	□ Teen	□ Adult	□ Elder	□ CBI
	Using Product		□ Yes	□ No		
	Celebrity		□ Yes_____		□ No	
	Occupation	_____			□ Not specified	
Person 4	Race	□ White	□ Black	□ Hispanic	□ Asian	□ Other □ CBI
	Gender	□ Male	□ Female			□ CBI
	Age	□ Child	□ Teen	□ Adult	□ Elder	□ CBI
	Using Product		□ Yes	□ No		
	Celebrity		□ Yes_____		□ No	
	Occupation	_____			□ Not specified	
Person 5	Race	□ White	□ Black	□ Hispanic	□ Asian	□ Other □ CBI
	Gender	□ Male	□ Female			□ CBI
	Age	□ Child	□ Teen	□ Adult	□ Elder	□ CBI
	Using Product		□ Yes	□ No		
	Celebrity		□ Yes_____		□ No	
	Occupation	_____			□ not specified	

Group of People □ Yes □ No

Number of people in group: _____ □ CBI

Group characteristics (*Check all that apply)*

Race	□ White	□ Black	□ Hispanic	□ Asian	□ Other □ CBI
Gender	□ Male	□ Female			□ CBI
Age	□ Child	□ Teen	□ Adult	□ Elder	□ CBI
Celebrity		□ Yes_____		□ No	

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