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Incomplete Syllogisms as Techniques of Medicalization: The Case of Direct-to-Consumer Advertising in Popular Magazines, 1997 to 2003

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The researchers collected a data set of consumer-directed print advertisements for antidepressant medications from three female-directed magazines, three male-directed magazines, and four common readership magazines published between 1997 and 2003. They evaluated these data for advertising techniques that enable drug advertisements to function as agents of medicalization. The investigators discuss the use of incomplete syllogisms in drug advertisements and identify strategies that might lead readers to frame personal physical and/or emotional conditions medically. Key features in advertisements function as the particular and general premises of a syllogism, and the concluding premise—that the reader has a mood disorder—is unarticulated but implied. The researchers examine the implications of incomplete syllogisms in advertisements and suggest that their use might lead readers to redefine their physical and/or emotional problems to fit medical models of mental distress.

Keywords: *direct-to-consumer advertising; medicalization; conditional syllogism; mood disorders; mental health; pharmaceuticals*

Mood disorder diagnoses have become increasingly prevalent among Americans. According to the National Institute of Mental Health (2001), an estimated 22.1% of Americans ages 18 and older—about 1 in 5—experience symptoms associated with a diagnosable mental disorder in any given year. About 9.5% of American adults are assumed to meet the criteria for a depressive disorder, which broadly includes such conditions as major depressive disorder, dysthymic disorder, and bipolar disorder. An additional estimated 13.3% of Americans could be diagnosed with an anxiety disorder, such as panic disorder, obsessive-compulsive disorder (OCD), posttraumatic stress disorder (PTSD), social anxiety disorder (SAD), generalized anxiety disorder (GAD), and an assortment of phobias. The current prevalence of mood disorder diagnoses might be linked to a greater understanding of the biological conditions (chemical imbalances in the brain, brain structure abnormalities, etc.) that are assumed to precipitate such illnesses, but there is considerable discussion that public awareness of mood disorders and their medical treatments have facilitated the increased numbers of these medical conditions.

In this study, we examine direct-to-consumer (DTC) print advertisements for medications that are frequently prescribed for the treatment of mood disorders. We performed a content analysis of DTC advertisements in popular magazines, which led to the identification of common themes in prescription drug advertisement techniques. Of the number of techniques we explored and identified in DTC advertisements, the most salient was the use of incomplete syllogisms (Gill & Maynard, 1995). In formal logic, a syllogism includes the statement of a particular premise, followed by a general premise, and finally a concluding premise. In the case of an incomplete syllogism, the concluding premise is not directly spelled out; instead, techniques are implemented within the particular and general premises that make adopting the concluding premise almost inevitable. The concluding premise is unstated but is implied by virtue of the statements that lead to it. We argue that the use of incomplete syllogisms in DTC advertisements

illustrates one aspect of medicalization (Conrad, 1975; Conrad & Schneider, 1980), or the various social processes by which personal troubles are cast in medical terms and become generally regarded as medical issues. As Conrad and Schneider stated, medicalization is "defining a problem in medical terms, using a medical language to describe a problem, adopting a medical framework to understand a problem, or using a medical intervention to 'treat' it" (p. 211). The concluding premise in incomplete syllogisms is a medicalizing one, in that it implores readers of DTC advertisements to view their problems as not personal but medical.

The DTC Era

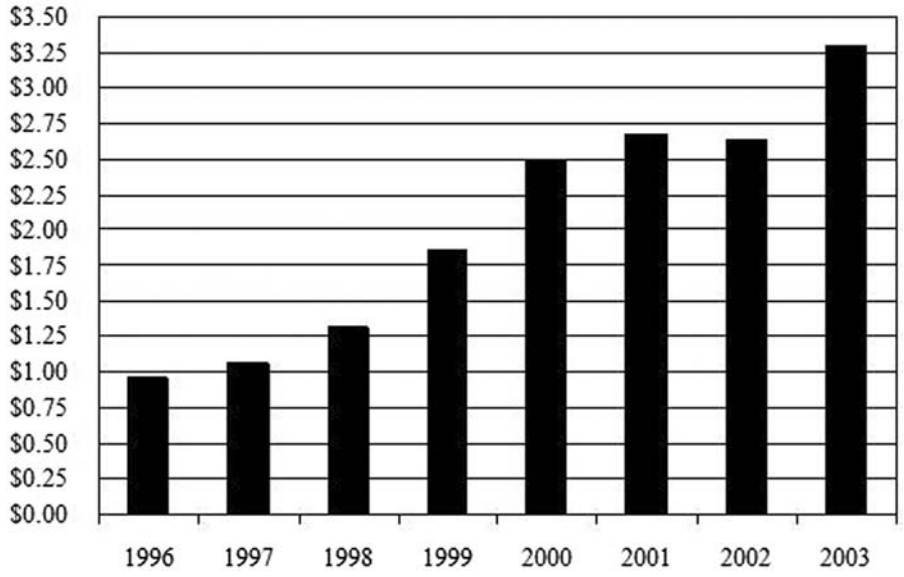
Prior to the early 1980s, the advertisement of prescription drugs in the United States was restricted to medical journals and other professional publications according to federal rules stemming from the Wheeler-Lea Act of 1938 and related pieces of legislation passed throughout the 1940s, 1950s and 1960s (Wilke, 1998). Such federal regulations operated under the assumption that only professional audiences should be privy to advertising from pharmaceutical companies and that this exclusivity would protect consumers from making uninformed health care choices. Pharmaceutical companies were compliant with these federal recommendations, but the Food and Drug Administration (FDA) had never established formal prohibitions against advertising directly to consumers. By the early 1980s, in response to the FDA's unclear policy about advertising to consumers, pharmaceutical companies began promoting drug materials directly to consumer audiences. As the visibility of these advertisements increased, so did concerns about consumer safety (Woodcock, 2003). Responding to public concerns, in 1983 the FDA issued a statement requesting a voluntary moratorium of DTC advertisements with the intention of investigating a variety of concerns about such advertising. Two years later, the FDA lifted the policy on the basis of the conclusion that DTC advertisements used sufficient safeguards to ensure consumer safety. The subsequent upsurge of pharmaceutical advertisements in print media and television in the 1990s led the FDA to rethink the lenient regulations of consumer-directed drug advertisements. Policies involving such advertisements endured numerous changes in the 1990s. At one point, the FDA placed constraints on DTC advertising that compelled pharmaceutical companies to choose between either promoting a brand without indicating its uses or discussing a medical condition without identifying the drug used to treat the condition (Morris, 2001; Wilke, 1998).

The FDA Modernization Act of 1997 plays a key role in the current prevalence of DTC pharmaceutical advertisements. This act, which predominately affected advertisements on television, plays a significant role in the visibility of drug advertisements in all forms of media, including print media. Drug advertisements in print media are integral to pharmaceutical companies' comprehensive multimedia campaigns to reach as many consumers as possible. Presently, pharmaceutical advertisements in all media outlets may identify both a medical condition and a drug treatment, and there is no limit on the amount of money that can be spent on such promotions (Conrad & Leiter, 2004; Thomaselli, 2003). The 1997 liberalization of the FDA's advertising policy, which allowed for unlimited consumer-directed advertising of pharmaceutical drugs, has spawned significant changes in advertising and health care. Among these changes are increases in advertising expenditures, increases in the number of drugs advertised, and, ultimately, changes in consumers' sources of health-related information.

Since the emergence of direct-to-consumer advertising, pharmaceutical companies have capitalized on the effectiveness of the self-care movement through more prevalent use of the media to target consumers. Advertising expenditures have increased between 13% and 20% each year since 1995. In 1990, several years prior to the liberalization of the advertising policy, an estimated $50 million were invested in DTC marketing (Sokotch, 1998). DTC expenditures reached $965 million in 1997, which is more than double the amount that was spent on ads in medical journals in the same year (Wilke, 1998). This figure tripled between 1997 and 2001, when it reached $2.68 billion (Yuan & Duckwitz, 2002). Pharmaceutical companies' DTC expenditures have continued to escalate, and in 2003, $3.3 billion was spent on this type of advertising.

This astounding growth in advertising expenditures has facilitated an increase in the variety of drugs that are advertised. In 1991, only one brand of pharmaceutical medication was DTC advertised. Twelve drugs were advertised in this manner by the end of 1997, and by 2000, at least 50 were seen in DTC advertisements (Belkin, 2001). The explosion of DTC marketing has increased the visibility and familiarity

Figure 1
Direct-to-Consumer Advertising Expenditures, 1996 to 2003 (in $ billions)



Source: National Institute of Mental Health (2001).

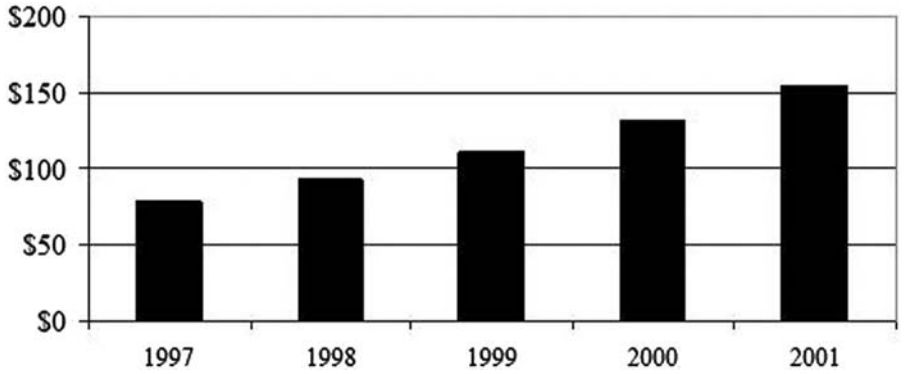
of prescription drugs, encouraging consumers to seek medications they might not need or be able to afford.

According to the U.S. General Accounting Office (2002), prescription drug expenditures are the fastest growing aspect of health care spending. The prescription drugs that are advertised directly to consumers tend to be the newest, most expensive products on the market (Elliot, 2002). Advertising might provoke an unnecessary demand for drugs, resulting in increasing costs of prescription medications for consumers and hefty profits for pharmaceutical manufacturers (American Marketing Association, 2003; Elliot, 2002). Figure 1 illustrates the findings of a 2002 National Institute for Health Care Management (NIHCM) analysis that suggests that increased sales of the prescription drugs that were the most heavily advertised to consumers accounted for a considerable share of the 1-year increase in pharmaceutical expenditures between 1999 and 2000. Consumer expenditures have increased 15% or more each year since the start of DTC advertising. This increase can be attributed to a rise in the prescription costs as well as an increase in the number of prescriptions written. NIHCM (2002) findings suggest that the number of retail prescriptions continues to increase steadily. In 1992, prior to the liberalization of the FDA's advertising policy, 1.9 billion prescriptions were sold in the United States. This figure increased to 2.4 billion in 1997 and hit 3.1 billion by 2001 (Figure 2). This generates concern that if DTC advertising actually improves the quality of health care, the benefits might not compensate for the rising cost of the drugs that are advertised.

Method

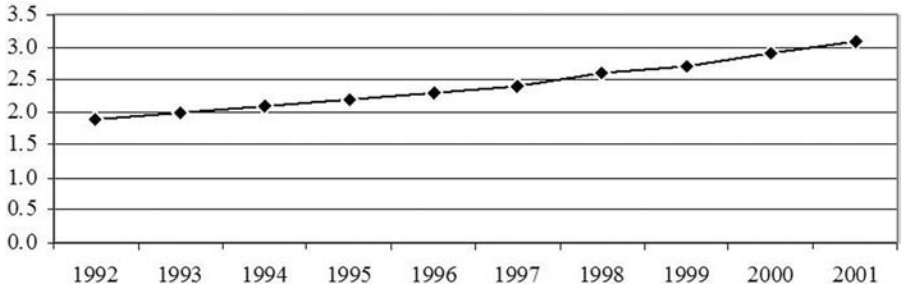
This study is based on a content analysis of consumer-directed pharmaceutical advertisements. Our data set consists of print advertisements for psychotropic medications that are commonly used to treat clinical depression, social anxiety, and a plethora of other social and emotional problems. The data were collected from the Texas Tech University and the University of Texas at Austin libraries in 2003. We collected advertisements from the 1997 to 2003 issues of four gender-neutral magazines (*People*, *Time*, *Newsweek*, *Reader's Digest*), three magazines that appeal primarily to a female audience (*Cosmopolitan*, *Ladies Home Journal*, *Redbook*), and three magazines that attract predominately male readers (*Esquire*, *Men's Health*, *Gentlemen's Quarterly*). These magazines were chosen based on their high advertising, circulation gross revenues, and general accessibility.

Figure 2
Consumers' Prescription Drug Expenditures, 1997 to 2001 (in $ billions)



Source: National Institute for Health Care Management Research and Education Foundation (2002).

Figure 3
Number of Retail Prescriptions, 1992 to 2001 (in billions)



Source: National Institute for Health Care Management Research and Education Foundation (2001).

We examined each issue of these 10 magazines for advertisements of interest, which we either photocopied or printed from a microfilm machine. The drugs portrayed in these advertisements include Prozac (fluoxetine HCl), Paxil (paroxetine HCl), BuSpar (buspirone HCl, USP), Effexor (venlafaxine HCl), Wellbutrin (bupropion HCl), and Zoloft (sertaline HCl). We emphasized these six drugs, as they are the most popular and regularly prescribed drugs for the aforementioned emotional problems. The data set is outlined in Table 1.

Data Analysis

After examining the content of each advertisement informally, we found that certain themes in our data set began to emerge. The data were then more specifically analyzed according to some of the principles of grounded theory analysis (Glaser, 1978; Glaser & Strauss, 1967; Strauss & Corbin, 1990). The raw data were initially categorized according to an open coding procedure (Glaser, 1978), which helped harness a preliminary set of themes within the data. For the purposes of this article, such preliminary themes centered on the ways in which DTC advertisements invite readers to explore their emotional troubles and encourage readers to seek medical attention. The ways in which such advertisements use images to achieve both of these aims was an additional point of analytical interest. The open coding procedure was followed by selective coding (Glaser, 1978), in which we examined the data for specific examples of these preliminary themes. During this latter procedure, we wrote extensive memos, which centered on two analytical questions:

Table 1
Total Advertisements/Medication and Magazine Readership Category

Magazine	Medication						Advertisements/ Magazine
	Zoloft	Paxil	Prozac	Effexor	BuSpar	Wellbutrin	
Common readership							
Time	6	7	8	1	3	0	25
Newsweek	2	5	8	1	3	1	20
People	15	26	14	4	14	2	75
Reader's Digest	0	0	4	3	6	0	13
Total							133
Female readership							
Ladies Home Journal	3	0	10	3	7	0	23
Cosmopolitan	0	13	7	0	0	0	20
Redbook	0	12	3	2	5	0	22
Total							65
Male Readership							
Esquire	0	13	0	0	0	0	13
Gentlemen's Quarterly	0	3	0	0	0	0	3
Men's Health	2	0	0	0	0	0	2
Total							18
Total advertisements/medication	28	79	54	14	38	3	216

How does the advertisement invite the reader to explore her or his own experiences within the context of a particular mental disorder? Advertisement narratives might ask the reader to identify with particular conditions and imply that these conditions are "abnormal." Every advertisement we examined illustrates this theme, asking the reader if he or she is troubled by specific emotions (sadness, anxiety, etc.) or certain physiological experiences (difficulty sleeping, excessive sleeping, etc.).

How does the advertisement define individual deviance as medical and encourage the seeking of medical attention? By using medical nomenclature to describe an emotional and/or physical trouble—for example, by stating that these conditions are "symptoms"—the advertisements in our data set exclude "normalizing" interpretations of such problems. Such advertisements commonly suggest that the reader ask a physician about the advertised drug, or indicate that the drug could be the solution her or his troubles.

Incomplete Syllogisms

We contend that these themes construct a mode of reasoning that is intended to lead the reader to designated conclusions. Provided that certain presuppositions—for example, that these emotional/physical problems are not normal; that they are, in fact, "symptoms"; and that they are best investigated through medical avenues—are internalized, this path of reasoning channels the reader toward certain conclusions.

The narratives in DTC advertisements use conditional syllogisms in an effort to influence readers. Investigations of conditional reasoning in the areas of philosophy, logic, psychology, and other disciplines have identified four principal types of conditional syllogisms. The Modus Ponens variety is most applicable to the conditional statements that appear in DTC advertisements. Modus Ponens inferences take the form:

If X then Y
X
Therefore, Y

This simple type of syllogism has been identified in patient-doctor interactions as a method of delivering "bad news" to patients. According to Gill and Maynard (1995), physicians use caution in providing diagnostic news, which often entails allowing patients to participate in the diagnostic process through the use of incomplete conditional syllogisms. In this process, clinicians present a set of Modus Ponens premises that imply a diagnosis and allow the recipient to reach the conclusion before it is explicitly articulated.

The delivery of diagnostic news using this device proceeds from the presentation of the particular premise, followed by the general premise, or the inverse, while insinuating, but not overtly stating, the diagnostic conclusion. Physicians often provide the first two components of the syllogism—the general and particular premises—indicating, for example, that (a) people with depression often experience sadness, sleep disturbance, and irritability; and (b) the patient at hand exhibits similar sadness, sleep disturbance, and irritability. The patient is invited to adopt the concluding premise: He or she has depression.

Through this technique, clinicians seek to shape patients' discernment about their conditions by shifting from implicit to more unequivocal talk (Lutfey & Maynard, 1998), thereby minimizing the prospect of resistance to a diagnosis (Gill & Maynard, 1995). The bulk of literature regarding the use of incomplete syllogisms involves interactions between at least two parties, specifically a doctor and a patient or a doctor and a designated caregiver, such as a parent; however, our analysis of DTC advertisements illustrates that the presence of both parties or the occurrence of interpersonal interaction are not necessary conditions in achieving the desired outcome.

Findings

Analysis of the data indicates that the incomplete syllogisms appear to proceed from the presentation of the particular premise, followed by a general premise, while alluding to the diagnostic conclusion. Virtually all of the DTC advertisements we sampled use the incomplete syllogism technique, although the blatancy with which the premises are illustrated varies to some extent. We organize our results according to our analytical questions and show how these demonstrate particular premises, general premises, and concluding premises.

The Particular Premise

Personal Experience Within the Context of Mental Disorder

Advertisements for psychotropic drugs often implore the reader to evaluate her or his own experiences within a mood disorder context, often accompanied by a description of such disorders. This technique prompts the reader to identify with specific emotional and/or physical maladies and then indicates that these conditions are problematic, perhaps symptomatic of something beyond the reader's control. Articulated through a series of statements that adopt first- and second-person stances, these examples of the particular premise are rife with a sense of futility.

DTC advertisements often invite readers to explore their personal experiences by describing conditions in first person narrative, with the pronoun "I" and the possessive pronoun "my." In lieu of a detached, objective account of human experience, the consumer reads the complaints just as he or she would verbalize them. The data, for example, contain phrases such as "I'm always tired," "I'm so restless," "My muscles ache," and "I just want to be alone." This technique employing such pronouns appears in 18.8% of advertisements found in common readership magazines and in 21.5% of advertisements in female-directed magazines, but is absent from advertisements in male-directed magazines. Thus, overall, this strategy is employed in 18.1% of the data set and appears to be directed toward a more female audience.

Designed to promote empathy and inhibit consumers from denying the presence of negative experiences, other DTC advertisements address the reader through a second-person narrative. Such advertisements approach the reader in a way that implies mutual understandings of physical and/or emotional troubles. For instance, the data include advertisements with statements such as "You know when you feel the weight of sadness," "Whatever you do, you feel lonely and don't enjoy the things you once loved," or "You may feel embarrassed when you are in a group," "You just feel so isolated," and so on. These strategies address the reader as an acquaintance, a mutual sufferer, and presuppose the reader's familiarity with such suffering. This strategy is found in 41.7% of the data set (42.9% of advertisements in common readership magazines, 40% of female-directed advertisements, and 39% of male-directed advertisements) and seems to address female, mixed, and male audiences equally.

The Bandwagon Effect: Encouragement to Join the "Community of Sufferers"

In conveying the particular premise, advertisements often seek to create a bandwagon effect, or "tell us how others are reacting and thereby influence how we are likely to react" (Sutherland & Sylvester, 2000, p. 46). Such advertisements favorably shape consumers' impressions about a particular product because consumers are led to believe that the use of such a product is done en masse; that is, consumers who use a

particular product do not do so in isolation. The bandwagon approach appears in several advertisements that indicate that the physical and emotional experiences described in the advertisement are common to a large group of people. This is often achieved by including an estimation of the number of people who purportedly identify with the conditions. For example, an advertisement for BuSpar indicates that if the reader identifies with particular emotions or conditions he or she "may be one of the over 10 million Americans" who have a medical condition called persistent anxiety (Bristol-Myers Squibb, 1997, p. 87). Similarly, a Paxil advertisement assures the reader that "You are not alone" and, in fact, might be in the company of more than 10 million others with social anxiety disorder (SmithKline Beecham Pharmaceuticals, 1999a, p. 39). A Zoloft advertisement claims that depression affects more than 20 million Americans (Pfizer, 2003).

Suggesting that such large numbers of people share these experiences conveys the notion that these conditions are common, even normal. Sutherland and Sylvester (2000) indicated that people are most likely to conform when they are insecure or uncertain about a situation. Because many of the experiences associated with depression and anxiety involve feelings of embarrassment or isolation—common emotional experiences—the bandwagon technique might be an effective way to advertise medications for these conditions. Assuming that the reader identifies with the conditions described in the advertisement, he or she might be increasingly likely to conform to the notion that he or she belongs to the group of "sufferers."

Data that employ the bandwagon technique attempt to lead readers to conform by not conforming. That is, readers are asked to identify with deviant experiences based on the knowledge that millions of others share those particular experiences. Zola (1966) indicated that "the empirical reality may be that illness, defined as the presence of clinically serious symptoms, is the statistical norm" (p. 616). This is based on the notion that many social pathologies or forms of deviance, such as those associated with mental illness, are so prevalent in the population that "were one to tabulate all the deviations that people possess or engage in, virtually no one could escape the label of 'deviant'" (p. 616). The medical language used to describe and label a problem might normalize an "abnormal" condition. Conrad and Leiter (2004) have remarked on media campaigns' paradoxical redefinition of disorders as both common and abnormal. Explaining the commonality of medical conditions might reduce the stigma attached to them; advertisements indicate that others share a condition. Thus, the reader is identified as a deviant, but he or she might be comforted by a larger, like-minded community.

The General Premise

Defining Deviance as Medical

The data also illustrate how DTC advertisements frame various emotional and physical conditions as "symptoms" of medical entities such as clinical depression and generalized anxiety disorder. One popular Zoloft advertisement, for example, invites readers to explore their feelings of sadness and loss of interest, then asserts, "These are some symptoms of depression. . . . Depression is a serious medical condition" (Pfizer, 2003, p. 47). Similarly, a Paxil advertisement states, "If you're one of the 10 million people who live with excessive uncontrollable worry, anxiety, tension, irritability, restlessness, and sleep disturbances . . . you could be suffering from Generalized Anxiety Disorder" (GlaxoSmithKline, 2001, p. 23). As the sociology literature has stated for decades, medically labeling a particular set of difficulties encourages people to believe that their troubles are beyond the bounds of "normal" human experience. Furthermore, the medicalizing potential of these narratives is intensified by their placing a litany of human emotional experiences underneath the rubric of "disease." Anxiety, worry, sleeplessness, irritability—experiences that could be easily viewed as unrelated—all fall underneath the rubric of depression. Found in almost half of the data (47% of common readership advertisements, 47.7% of female-directed advertisements, and 27.8% of male-directed advertisements), these types of narratives illustrate how a medicalizing technique mirrors "catch-all," inelegant diagnostic categories such as depression.

The Narrative of Incompleteness

Medicalizing narratives within the data often use unconventional grammar to describe particular mental and emotional conditions. The use of fragmented sentences, for example, suggests disconnection with respect to lucid thought processes and removal from emotional and behavioral normalcy. For instance, one Prozac advertisement indicates that the reader "may have trouble sleeping. Feel unusually sad or irritable. Find it hard to concentrate. Lose your appetite. Lack energy. Or have trouble feeling pleasure" (Eli Lilly, 1998, p. 182). Statements such as these lack the standard grammatical elements that

make written language "flow" and intend to illustrate how a person can be in only "partial touch" with his or her emotional troubles. Broken grammar articulates a sense of "incompleteness," whereby these experiences are profound and pervasive, yet fleeting and inaccessible. This narrative describes unpleasant physical and emotional conditions in a way that is unpleasant to read, thereby enforcing the notion that they are indicative of disease. Advertisements that employ this strategy are found in roughly 25% of the data for all audience types.

Narratives of incompleteness in the data also address and exclude nonmedical explanations for personal troubles and admonish readers to participate more completely in their lives. For example, advertisements present questions such as "Are you giving up days to what you think is PMS?" This particular advertisement informs the reader that a condition that she interprets as PMS, a nonmedical issue, is actually a medical problem called premenstrual dysphoric disorder (PMDD). This technique rules out alternative interpretations of one's problems and claims that it is a medical entity with specific symptomatic criteria. Questions like the one above also imply that readers are commonly mistaken and uninformed: She gives up her days to what she thinks is PMS, but she is wrong. In addition, the days thrown away to deal with "PMS" are an unnecessary byproduct of her misinformation. This technique is found in 48.7% of advertisements in common-readership magazines, 63% of advertisements in female-directed magazines, and 44% of advertisements in male-directed magazines.

The Concluding Premise

Self-Diagnosis and Formal Medical Labels

Reader identification with the abnormality of particular physical and/or emotional conditions leads to implied logical conclusions. As discussed, the delivery of an incomplete syllogism seeks to shape the reader's perception of her or his condition, which might transpire in the form of self-diagnosis and eventually seeking a formal, medical diagnosis. Given that the reader medically problematizes conditions such as worry, restlessness, sadness, and sleeplessness, advertisements assume the role of a diagnostic authority and indicate that the condition requires attention, which, more often than not, encourages some type of medical consultation.

All of the advertisements in our data set encourage readers to seek medical attention as a solution to their "problem," often indicating that the drug advertised can be obtained only through a medical professional. Some advertisements suggest that readers talk to a doctor about a disorder or about a particular drug, or indicate that only a medical professional can diagnose and medically treat a disorder. For example, after explaining at length to the reader about social anxiety disorder (SAD), how it can cripple one's life, and so on, an advertisement for Paxil then advises the reader to talk to a doctor to seek more information about SAD, and specifically suggests that the reader "ask your doctor about Paxil today" (SmithKline Beecham, 1999b, p. 29). An advertisement for BuSpar takes a similar stand, encouraging the reader to "ask your doctor if BuSpar is right for you" (Bristol-Myers Squibb, 1999, p. 83). Well-known statements such as these demonstrate the perplexing social role that advertisements can play in the medicalization process. Such ads use diagnostic authority by explaining some things about the nature of a particular medical condition, but instead of making definitive statements to the reader, they defer to a doctor's authority.

The Sick Role

In deferring to a doctor's authority, the DTC advertisements in our data set contain elements consistent with Parsons' (1951) propositions about the "sick role" in society—a role that illustrates how medicine can be employed as an agent of social control (also see Wolinsky & Wolinsky, 1981). According to Parsons, crime and illness are violations of social norms, but whereas crime is considered willful deviance, illness is typically not intentional. Because of the degrees of intent associated with these two forms of deviance, they are met with different social responses; crime is punished, and illness is treated. Parsons argued that ill people may enter the "sick role," which includes the basic premises that (a) the incapacity to perform regular duties is not the fault of the sick person; (b) because of an individual's incapacity to perform his or her roles and duties, the individual is defined as sick and is exempted from performing necessary duties; (c) the sick person realizes that the illness is undesirable; and (d) the sick person seeks treatment to get well and complies with the prescribed treatment. The exemption is temporary, however, and is contingent on the sick person's seeking treatment and compliance with prescribed treatment. One Effexor advertisement, for example, indicates "when suffering from depression or generalized anxiety disorder, the true goal is to get

well" (Wyeth Pharmaceuticals, 2000). The advertisement informs the reader "you can achieve true wellness" because the goal of Effexor is "getting you well again" (p. 12). The advertisement depicts a woman playfully lifting a diaper-clad child, implying that her conventional duties of performing and enjoying child care can be resumed with the help of medication.

Discussion

DTC advertisements for psychotropic drugs promote consumer awareness of the medications that are used to treat specific physical and emotional conditions, and by using techniques that convey the message that particular drugs can benefit almost anyone, the advertisements might contribute to medicalization. One very visible technique that appears in DTC advertisements is the use of conditional reasoning.

Although the bulk of research on the use of incomplete syllogisms in medical encounters focuses on discourse between at least two parties, in this investigation, we examined the use of the Modus Ponens form of conditional reasoning in advertisements for psychotropic drugs. We found that the reasoning trajectories in the data often progress from the delivery of a particular premise to the general premise, and the concluding premise is left unarticulated but is implied. Advertisements establish the particular premise by attempting to lead readers to identify with particular physical and emotional conditions. The conditions are then framed as symptomatic of a mood disorder, representing the general premise. The reader might be led to form the concluding premise, that her or his physical and emotional experiences are symptomatic of a disorder and that he or she requires medical treatment. We believe that the use of this technique, in that it conveys a narrative that paints the concluding premise as almost inevitable, might potentially lead readers to self-diagnose and seek formal diagnosis and medication for their physical and emotional conditions.

DTC advertisements facilitate medicalization by acting as a liaison between pharmaceutical companies and the public and by attempting to shape readers' self-conceptions. Phenomena that move into the realm of medical problems take on a specific medical label, and conditions associated with these entities come to be regarded as "symptoms." Medicalization is not an "either/or" process—phenomena can be medicalized to varying degrees. Conrad and Schneider (1980) have argued that the degree to which particular phenomena can be medicalized rests on such factors as the existence of competing definitions, recognition of a condition as a medical problem by the medical profession, insurance companies' coverage of the condition, and the existence of parties disputing the medical definition. The DTC advertisements analyzed above clearly function as agents of medicalization by addressing at least one of these criteria: They disseminate medical definitions of emotional problems to the public, which might minimize the existence of competing definitions, thereby increasing the degree to which such conditions are medicalized.

Medical language is often used in conveying the general premise, which might lead readers to self-diagnose and seek formal medical intervention. Brown (1995), for example, indicated that a diagnosis "locates the parameters of normality and abnormality, demarcates the professional and institutional boundaries of the social control and treatment system, and authorizes medicine to label and deal with people on behalf of the society at large" (p. 39). Brown conceptualized diagnosis as a "*language of medicine*" (p. 39, italics in original text) that ultimately legitimizes the existence of an illness and might facilitate social control. Blaxter (1978) identified that diagnoses might function differently, depending on one's social role. For patients, diagnoses might provide information about the problems they are experiencing, producing a sense of personal control. Diagnoses also function to provide control for physicians by imparting the notion that the physician has mastered the understanding of a particular problem and can administer treatment. Based on this study, we feel that it is imperative that future studies continue to explore how a physician's role in diagnosis and treatment is influenced by DTC advertising.

With regard to self-diagnosis, Conrad and Potter (2000) have argued that adults who self-diagnose disorders might have become familiar with the condition through the media, illustrating the public's reliance on and confidence in the media for information and opinions. Media portrayals of medicine as the "triumphant conqueror of disease" (Karpf, 1988 in Williams & Calnan, 1996, p. 1616) shape the public's perception of health and illness. Individuals gain only enough information from pharmaceutical advertisements to form a faint conception of a disorder and a self-diagnosis. Media outlets such as popular magazines are an effective means of disseminating information about drugs and medical conditions, and

highlight the medical industry's capabilities. The public might regard media imagery, specifically drug advertisements, as reliable sources of information about the nature and treatment of particular disorders; thus, advertisements for psychotropic medications might function as a component of the lay referral system.

Similar to Parsons (1951), Conrad and Schneider (1980) have addressed a number of consequences associated with medicalization, for example, the medical social control of "deviant" emotions or physical conditions. Significant consequences might result from situations in which the medical industry wields power over the lay populace. In the case of medicalizing human emotions, modern medicine has the authority to determine what is "normal" and "abnormal" and to introduce methods to "treat" deviant emotional states.

This study bolsters previous assumptions in the medicalization literature (Conrad, 1975; Conrad & Schneider, 1980) that defining certain behaviors as medical issues eliminates or severely decreases individuals' responsibility and subsequently reduces the status of the actor. Medicalization generates confusion about what agents are accountable for deviant behavior and creates a dichotomy between individuals who are not held accountable for their conduct and those who are (Conrad & Schneider, 1980). As Parsons (1975) has argued, the "not-completely-responsible sick are placed in a position of dependence on the fully responsible nonsick" (cited in Conrad & Schneider, 1980, p. 249). This dependence perpetuates the authority of the medical industry, thereby facilitating further medicalization. In that it bolsters the authority of medical discourses, the phenomenon of DTC advertising must be continuously scrutinized, both for its content and for the ways in which it is regulated.

A second consequence of medicalization involves reinforcing the perception that medicine is morally neutral and objective (Conrad & Schneider, 1980). Defining particular emotions and physical conditions with medical language conceals the moral and political processes whereby such conditions come to be understood as deviant. Medical language allows powerful social entities to define unacceptable behaviors and emotions without giving the appearance that the judgments are morally derived. Furthermore, medical explanations "have a high likelihood for dominance and hegemony: they are often taken as the last scientific word" (Conrad & Schneider, 1980, p. 249). Problems are shifted from the public sector and placed under the control of medical experts (Conrad, 1975).

Medicalization allows social control over persons who are defined as ill by creating possibilities for "certain things to be done that could not otherwise be considered" (Conrad, 1975, p. 18). The dominant social ideology is maintained and reinforced through the introduction of psychoactive drugs to eliminate "unacceptable" forms of behavior and emotions. Conrad and Schneider (1980) suggested that if a medical intervention is determined to be useful in controlling deviant behavior, such behavior will become medically defined and diagnosed. This allows the "individualization of social problems" (Conrad, 1975, p. 19). Medicalization leads to actions that seek to change the individual rather than evaluating the social contexts in which deviance occurs. Attention is diverted from problematic social issues, rendering the possibility of social change virtually unthinkable. A related consequence of medicalization is the "depoliticization of deviant behavior" (Conrad, 1975, p. 20; Conrad & Schneider, 1980, p. 250). Defining deviance in medical terms leads us to ignore the possibility that the behaviors or emotions might be intentional protests against existing political or social environments.

As agents of medicalization, advertisements facilitate the development of such problems as the displacement of responsibility, belief in medical objectivity, expert control, medical social control, individualization of problematic social issues, and depoliticization of deviance (Conrad, 1975; Conrad & Schneider, 1980). Advertisements also generate the possibility for further social consequences. According to Conrad and Leiter (2004), DTC advertising for medicalized problems and medical interventions increases consumer demand for pharmaceutical products. Advertisements are used to increase awareness of pharmaceutical products, generating an influx of new consumers into the market by "creating a previously unrecognized demand for the product" (p. 11). DTC advertising might lead the public to perceive problems through a medical view, increasing the demand for pharmaceutical solutions (Conrad & Leiter, 2004). Consumers might come to believe that a prescription is right for them when it is not, leading to prescription drug abuse and misuse. Advertising might provoke an unnecessary demand for drugs, resulting in increasing cost of prescription medications for consumers while grossing hefty profits for pharmaceutical manufacturers (American Marketing Association, 2003; Elliot, 2002).

Conclusion

The use of incomplete syllogisms in advertisements for psychotropic medications might contribute to the medicalization of particular physical and emotional conditions. Techniques used in advertisements to bring readers to identify with particular mental and physical conditions and then indicate that the conditions are problematic might lead readers to self-diagnose mood disorders and seek professional medical treatment. This research raises concerns regarding the potential effects of advertising prescription drugs directly to the public. Future research might involve controlled studies in which readers of particular advertisements are surveyed to assess how influential such ads are in making them perceive their own personal difficulties. Such studies might also benefit from a comparison of the effects of print media to television DTC advertisements. Having a more comprehensive grasp on how various media are currently used to further disease models of human troubles may help keep the proliferation of medical hegemony in check.

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