

# Consumer Response to Print Prescription Drug Advertising

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Direct-to-consumer (DTC) prescription drug advertising has grown significantly over the last few years and extended into a variety of health conditions, even as the controversy around it continues. How do consumers feel about this advertising, who reads it, and what are the likely behavioral responses? This article attempts to answer these questions. Based on a sample of 1,475 women who are regular readers of magazines, consumer attitudes and response to print DTC advertising is explored. Results show that women generally value DTC advertising, and readership levels are substantial especially if the advertisement is about a symptom that the respondent has or may have. DTC advertisements also seem to encourage respondents to ask their doctors about what they saw advertised, and some respondents are likely to insist on prescriptions as well. Age and user-ship of prescription drugs significantly enhance the interest and response to this category of advertising.

EVEN AS THE CONTROVERSY around direct-to-consumer (DTC) prescription drug advertising continues to gain momentum, advertising budgets for these products are escalating. Pharmaceutical companies spent \$1.8 billion on advertising in 1999, up from \$1.3 billion in 1998, and \$1 billion in 1997 (Kranhold, 2000). How do the consumers, targets of this advertising, feel about DTC advertising? How effective is this advertising and who reads it? What actions, if any, are taken after exposure to these advertisements? This article is designed to answer these questions by exploring consumer reactions to DTC advertising and evaluating their readership of and response to this type of advertising among women magazine readers. The results should help in providing directions for the pharmaceutical industry in planning their marketing communications strategies and offering information for the development of guidelines for this emerging advertising category.

## BACKGROUND AND PURPOSE

The phenomenal growth of DTC advertising is a result of FDA moves in 1997, which have made it easier for pharmaceutical companies to advertise prescription drugs, especially on television. These moves include permitting advertisers more flexibility in providing information about the advertised drug. For example, the new guidelines allow advertisers to include both the name of the drug and the health condition it treats, along with a statement of major risks and side effects, and a reference to a source of further information such as a toll-free number or website without requiring long statements of side effects and contraindications (Brumback, 1999).

Recently, huge proportions, in some cases as high as 90 percent, of a brand's total promotional budget are being spent on DTC mass media (West, 1999a). This shows a marked shift in strategy from the traditional focus on professional cam-

paigns and promotions. Not only are high proportions of total advertising and promotional budgets being shifted to consumer spending, the total budgets themselves for many brands are being increased to enormous levels, by any standards. This is true for a number of companies and for a variety of products. Indeed, many prescription drug brands have become household names due to the extensive, continued advertising and promotional activities, even among nonsufferers.

The growth in prescription drug advertising spending is also a result of the extension of advertising into a variety of health conditions, even those that were considered somewhat taboo until recently. Conditions that are highly personal and not openly discussed are currently advertised not only in discreet print media but also in other types of media including television, where exposure to the advertising may be in a social, nonprivate environment. Additionally, products are being advertised for conditions that patients may not even recognize themselves and need professional diagnosis.

Further, a number of these drug products are treatments for conditions that have a fairly low incidence of sufferers in the general population but, regardless of that, are advertised in the mass media. In the culture of a highly segmented marketplace, this mass-marketing approach is worth noting. The effectiveness of DTC advertising has still to be determined, and some analysts feel a lot of media spending has yet to translate to a lot of branding (Barrett, 1998) although other industry observers note that there have been some success stories (Brumback, 1999; Goetzl, 1999). Of course, for many brands, preempting the category initially may prove to be worth the large investments, especially for products affecting relatively larger

## **DTC advertising helps to educate consumers about the choices available in treatment, as well as provide information about various health conditions . . .**

proportions of the population. Nevertheless, return-on-investment calculations are still important and should be helpful in deciding future directions.

What really makes all of this so interesting is that while the consumer is the ultimate user of the product, decision to use or buy is only indirectly, if at all, dependent on the consumer who has become the target of this extensive advertising. This advertising serves as a source of information and awareness; the patient must obtain a prescription for use through a doctor or health-care professional.

Proponents of DTC prescription drug advertising believe that the knowledge and information function of such advertising has enormous benefits. It is claimed that DTC advertising "is an excellent way to meet the growing demand for medical information, empowering consumers by educating them about health conditions and possible treatments" (Holmer, 1999). DTC advertising helps to educate consumers about the choices available in treatment, as well as provide information about various health conditions, which may not be widely known or easily recognized by patients. In some cases, patients may not even be aware that treatment exists. Armed with knowledge from DTC advertising, consumers may discuss their treatment options with their doctors and be better qualified to help manage their own health care. Patient compliance may also be improved as a result of this interaction. With an aging population and the cultural trend toward increasingly easy access of medical information, DTC advertising is seen as appropriate, relevant, and beneficial.

Opponents feel DTC advertising, even when truthful, may not always be completely read, so that consumers will not fully comprehend the side effects and risks associated with a drug's use. Further, some feel the increased patient involvement in the prescription development process may have unfavorable medical consequences since physicians may be persuaded, even pressured, by patients to prescribe the requested medication even when it is not the first choice of the physician. Many believe that, in fact, the "principal effect of DTC marketing is to create consumer demand, changing the physician-patient relationship to a physician-consumer relationship" (Hollon, 1999). It is claimed that pharmaceutical manufacturers are using enlightened "health-care consumers" to market their drugs through health-care providers (Hoffman, 1993). There is concern whether inappropriate prescribing is leading to people obtaining drugs they should not be getting. Not the least of all, DTC advertising's impact on costs of medications is also a serious consideration.

### **RESEARCH QUESTIONS AND STUDY OBJECTIVES**

Where do the consumers stand on all of this? What are their attitudinal reactions to DTC advertising they see in magazines and newspapers? Who reads these advertisements and what response action is taken, if any, after exposure to these advertisements? The present research is designed to answer these questions among women magazine readers.

In addition to providing information to help plan directions and strategies for this

class of advertising, the answers to these questions are also important because they should have an indirect impact on *all* advertising. Reactions and response to DTC advertising can be expected to influence the *overall* attitudes to advertising in general, which in turn have been found to influence effectiveness of any specific advertising (Mehta, 2000).

More specifically, the objectives of this article are to evaluate:

- consumer attitudinal reactions toward print DTC advertising in terms of its importance, value, and believability
- readership of and interest in such advertising, including disclaimers in small print in these advertisements
- persuasiveness of and response to such advertising.

Market segment differences in the results were also explored. Specifically, demographic differences related to age, education and income levels, as well as differences among groups with varying involvement levels as measured by category usership were evaluated. It is possible that respondents who currently take prescription drugs may have more favorable attitudes and reactions to DTC advertising and be more likely to read such advertising than those who are not users of prescription drugs. Additionally, having a family member who takes prescribed medications may increase the involvement levels as well. The article explored the impact of self and/or family usership on attitudes, readership, and response to such advertisements.

Additionally, attitudes and response to DTC advertising can be expected to influence how likely consumers are to attend to any specific drug advertising. The methodology of the present study also included:

- exploring the impact of reactions and response to DTC advertising on recall

of specific prescription drug advertisements in magazines.

#### PAST RESEARCH AND FINDINGS

While there has been a substantial amount of discussion regarding the pros and cons of DTC advertising, research studies in the area are relatively few. While overall attitudes toward advertising in general have been evaluated extensively by researchers over the years (e.g., see Mittal, 1994; Shavitt, Lowrey, and Haefner, 1998; Zanot, 1981), advertising in the specific DTC prescription drug category, however, is a relatively new phenomenon. Given the various opinions and interest groups involved, this is an important area of research. Both consumers' as well as health-care professionals' interests and attitudes are relevant and need to be explored.

Results from an early one-market exploratory consumer study conducted in the early 1990s before a large volume of DTC advertising appeared in the media show consumers were open to the idea of DTC advertising. Respondents thought they would likely respond to DTC advertising by initiating a discussion with a health-care professional, and some respondents also said they would be likely to ask their doctor for a prescription for a drug they saw advertised but very few felt they would change their doctor if they did not receive the prescription (Everett, 1991). Along those lines, in another study conducted soon after within another metropolitan area, Alperstein and Peyrot (1993) found consumers were moderately aware of the few DTC advertisements that were running at that time and were generally in favor of prescription drug advertising. Additionally, results showed that a large majority of the respondents said that they felt DTC advertising could educate consumers while some, a little over one in four respondents, also reported some con-

cern that such advertisements would be confusing.

As DTC advertising has grown, more recently, West (1999b) reports about 81 percent of the public surveyed by a health magazine have seen a DTC advertisement and 44 percent of the total sample have talked to a physician about the advertised drug. Holmer (1999) reports the findings of a early 1998 study conducted by *Prevention* magazine that 53 million consumers talked to their physician about a medication they saw advertised, and as many as 12.1 million consumers received a prescription as a direct result of seeing a DTC advertisement. Based on a Scott-Levin Audit, Zoeller (1999) reports that across all conditions, patients requested a specific brand-name drug therapy in about 10 percent of the physician visits, but for some specific conditions for which advertising campaigns were running currently, one-fifth to as high as two-thirds of physician visits included a request for drug therapy showing that the effects of advertising can be immense. Angrisani (1999) reports results of a Time Inc. study that awareness of drugs for certain categories was dramatically up, and about 30 percent of the respondents discussed a drug with their doctor after seeing an advertisement for the product; additionally, almost one in four patients who visited a doctor as a result of seeing an advertisement, received a prescription for it. An AARP survey found that about one-third of the consumers surveyed failed to notice the small print in advertisements spelling the side effects and risks of medications (Kranhold, 2000). The study also found that roughly half of the respondents said DTC advertisements gave them enough information about a drug's risk and side effects, while about 45 percent felt they did not provide enough information.

Studies conducted among doctors and physicians are showing the same find-

ings: there is a rise in the number of patients asking for a drug by name (Liebman, 1993), and some health-care professionals are reporting that they feel pressure to prescribe the drug when patients ask about it after seeing an advertisement (Spurgeon, 1999). Kravitz (2000) reports that a 1997 study of family physicians found that four-fifths of the sample believed that DTC advertising was not a good idea because of the cost involved, and especially because the advertisements promote a "misleading, biased view" of drugs. Petroschius, Titus, and Hatch (1995), however, found physicians are generally favorable to DTC advertising, but younger, less experienced physicians tend to view pharmaceutical advertising targeted to consumers more favorably and are more responsive to patient inquires and requests for prescription drugs than older, more experienced physicians. Differences in attitudes by physician specialty were also found in this study as were found in a study of U.K. doctors by Reast and Carson (2000). The attitudes and reactions of health-care professionals to DTC advertising are important mediators of the success of DTC advertising overall and need to be considered. The present study, however, is focused on consumer attitudes and response to DTC advertising.

While response to all types of DTC advertising is relevant, print advertising is especially important for this category of products since it allows consumers to spend as much time as they want to look through and read these prescription drug advertisements. In a content analysis of 24 popular magazines, Pinto (2000) found that DTC advertisements are found in every category of magazine and use a variety of informational and emotional appeals. Zoeller (1999) notes that based on comments in a Scott-Levin DTC advertising audit, many women prefer to read medi-

## **The attitudes and reactions of health-care professionals to DTC advertising are important mediators of the success of DTC advertising overall and need to be considered.**

cal information in magazines and bring them to discuss with their doctor. West (1999b) reports findings of a study that while magazine and TV advertisements were equally effective in getting consumers to ask doctors about prescription drugs, over half the respondents said they preferred print advertisements that they could hold on to and look through carefully. The present study is conducted in context of print DTC advertising among women magazine readers.

### **SAMPLE AND METHODOLOGY**

The data for the present study were collected using Gallup & Robinson's standard Magazine Impact Research Systems (MIRS) for print advertising testing. A total of 1,475 women, 18+ years of age and regular magazine readers from over 30 geographically dispersed markets nationwide, participated in the study (see Appendix for sample demographics). These data were collected over many magazine tests from 1997 through 2000. For each individual study, participants from typically 10 major metropolitan, geographically dispersed markets around the country were recruited via a personal interview using a combination of door-to-door and mall/other intercept methods. A standard screener was used for recruiting purposes, with respondents qualifying on being regular readers (two of the last four issues) of the class of magazine in which the advertising appeared.

MIRS is an in-magazine, at-home advertising copy testing system. Respondents are exposed to the advertisements within

the magazine as they read the test magazine in their homes. One of the strengths of this system is that it attempts to closely approximate natural advertising exposure. Respondents are recruited to participate in a magazine readership study, naïve to the true purpose of the study, and are asked to read the test issue of the magazine "as they normally would." A telephone interview is scheduled for the day after exposure to discuss the magazine editorial and content. Advertising effectiveness measures are obtained during this interview such as recall (intrusiveness) for about 15 selected test advertisements in that particular magazine, including the DTC advertisements that appeared in the issue. Next, demographic information is collected. Finally, attitudes and reactions toward DTC advertising were collected. Respondents were also asked whether they themselves, or anyone in the immediate family, currently take medications prescribed by doctors. Among other measures, recall for the DTC advertisements were obtained as part of this interview.

### **Measures**

**Reactions, readership, and response toward DTC advertising.** Various statements were used to measure attitudinal reactions, readership, and response toward DTC advertising on 5-point anchored scales (strongly agree/disagree, always read/always skip, very likely/definitely would not ask or insist, as appropriate). Respondents were asked about their readership of such advertisements



in newspapers and magazines, about their perceptions regarding the importance of such advertising as compared to other regular advertising, believability of such advertising, ease of understanding, whether DTC advertisements downplayed the serious nature of the category (this last statement was included in only later studies), as well as the likelihood that they would ask their doctor about a advertised drug or treatment they saw advertised, or insist on getting prescriptions for it. For each statement, respondents were grouped into three groups (top 2 box, middle box, and bottom 2 box) for further analysis.

**Intrusiveness/recall.** Fifteen selected advertisements in each test magazine were cued by brand name. One to three DTC advertisements were cued in each study. Respondents who claimed to recall any of one of these advertisements were asked open-ended questions about the advertisement. The responses to these advertisements were used as evidence to prove that the particular DTC advertisement was actually recalled. Proved recall is a more stringent measure of attention-getting power and memorability of an advertisement than claimed recall. Respondents who recalled (proved) any one of the cued DTC advertisements were grouped as Recallers of DTC advertisements and results were compared to Nonrecallers of such advertisements.

**Demographic/usership subgroup.** Results across various age, education, and household income levels were also evaluated. Respondents were also identified as prescription drug users or nonusers based on whether they were currently (at the time of data collection) taking any medication that had been prescribed by doctor, and differences among these groups were explored. Additionally, in some subsequent magazine tests, respondents were

also asked whether any member of their immediate family was taking any medication that had been prescribed to them by a doctor, and the impact of this was also evaluated for the major variables of interest.

## RESULTS

### Reactions, readership, and response to DTC advertisements

**Total sample.** As shown in Table 1, on a total sample basis, results show that a majority of respondents, over three out of five, feel DTC advertisements communicate more important information than regular advertising. About half of the sample also feels DTC advertisements are more believable and some agree that DTC advertisements are easier to understand, but others, over a third of the sample, are also of the opinion that DTC advertisements underplay the serious nature of prescription medications.

In terms of readership levels, a little less than one out of three respondents claim to regularly read DTC advertisements in newspapers and magazines. Readership levels, however, increase to nearly one out of two if the advertisement is about a symptom the respondent has or may think she/he has. Disclaimers printed in small letters with the advertisement are also generally read by those who read DTC advertisements: a significant majority of those who say they almost always/usually read DTC advertisements, also claim to always/usually read the disclaimers printed in small letters in these advertisements (74 percent). The remaining readers of DTC advertisements may or may not read the accompanying disclaimers (19 percent), or say they typically skip reading the disclaimers (7 percent). Among those who regularly read advertisements about symptoms they have

or may have, very similar proportions of respondents report reading the disclaimers in small print in these advertisements on a regular (74 percent), occasional (19 percent), and infrequent (7 percent) basis.

When asked about the response actions taken after exposure to prescription drug advertising, more than two out of five respondents say they are very or somewhat likely to ask their doctors about a specific medication they saw advertised. Some respondents, about one in six, also say that they are likely to insist on prescriptions based on what they have seen advertised.

**Age groups.** Significant differences are seen among the various age groups for these results as shown in Table 2: older respondents (35–44 and 45+ years of age) compared to the younger respondents (18–34) more often agree that prescription drug advertisements offer more important information than regular advertising, and generally feel DTC advertisements are more believable and easier to understand although no differences are seen for the attitude related to DTC advertisements underplaying the serious nature of prescription drugs. Not surprisingly, the older respondents (especially those 45+ years of age), who have more positive attitudes to DTC advertisements, read DTC advertisements in general, as well as advertisements for symptoms respondents themselves or family members may have, significantly more regularly than younger respondents. Along the same lines, respondents 45+ years of age report reading the disclaimers in small letters in these advertisements more often and are significantly more likely to ask doctors about specific drugs they saw advertised compared to the younger groups. Older respondents, however, are no more likely to insist on prescriptions than younger respondents.

**TABLE 1**  
Total Sample\*: Reactions, Readership, and Response

	Reactions and Attitudes		
	Strongly Agree/ Agree (%)	Neither Agree/ Disagree (%)	Strongly Disagree/ Disagree (%)
<i>Prescription drug advertisements . . .</i>			
Communicate more important information than regular advertising	62	27	11
Are more believable than regular advertising	50	34	16
Are easier to understand than regular advertising	43	32	24
Underplay the serious nature of prescription medication**	35	29	36
	Readership		
	Almost Always/ Usually Read (%)	May/ May Not Read (%)	Almost Always/ Usually Skip Them (%)
<i>When you see advertisements for prescription medications . . .</i>			
In magazines or newspapers	30	34	36
For a symptom that you may have or may think you have	47	27	26
For a symptom that one of your immediate family members have**	50	30	20
Disclaimers printed in the small letters with the advertisements	30	31	39
Disclaimers printed in the small letters with the advertisements . . . for a symptom that you may have or think you may have	39	30	31
	Response		
	Very/Somewhat Likely Ask/Insist (%)	May/May Not Ask/Insist (%)	Definitely/Probably Not Ask/Insist (%)
<i>How likely would you be to . . .</i>			
Ask your doctor about a specific medicine or treatment that you saw advertised	43	29	28
Insist that your doctor prescribe a specific medicine or treatment that you saw advertised	17	29	53

\*Total sample size is 1,475 respondents.

\*\*Partial sample asked this question.

**TABLE 2**

## Reactions, Readership, and Response: By Age and Involvement (Usership) Levels

	By Ages Groups (years)			By Rx Drug Usership: Self/Family*			
	a	b	c	d	e	f	g
	18-34	35-44	45+	Self: User	Self: Nonuser	Self or Family: User	Self or Family: Nonuser
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<b>Reactions and Attitudes (Respondents Strongly Agree/Agree)</b>							
<i>Prescription drug advertisements . . .</i>							
Communicate more important information than regular advertising	59	65a	66a	72e	57	66	60
Are more believable than regular advertising	47	53	54a	60e	46	60g	43
Are easier to understand than regular advertising	40	47a	46	49e	40	48g	39
Underplay the serious nature of prescription medication	36	34	33	35	35	33	36
<b>Readership (Respondents Almost Always/Usually Read)</b>							
<i>When you see advertisements for prescription medications . . .</i>							
In magazines or newspapers	24	30a	42ab	43e	23	46g	22
For a symptom that you have or think you may have	42	47	59ab	66e	37	61g	38
For a symptom that one of your immediate family members have	44	50	56a	61e	42	61g	39
Disclaimers printed in the small letters with the advertisements	26	30	40ab	45e	22	45g	24
Disclaimers printed in the small letters with the advertisements . . . for a symptom that you have or think you may have	35	42a	46a	56e	31	47g	32
<b>Response (Respondents Definitely/Probably Will Ask/Insist)</b>							
<i>How likely would you be to . . .</i>							
Ask your doctor about a specific medicine or treatment that you saw advertised	39	42	54ab	60e	34	55g	31
Insist that your doctor prescribe a specific medicine or treatment that you saw advertised	17	18	18	22e	14	23g	11
(Base)	(686)	(421)	(326)	(500)	(968)	(248)	(227)

\*Partial sample asked about family usership of Rx drugs.

a-f: Significantly higher than subgroup marked with that letter at the 95% confidence level.

a-f: Significantly higher than subgroup marked with that letter at the 99% confidence level.

**Education and income groups.** Results were analyzed among education and income levels among this study sample of regular magazine women readers. No significant differences were found among respondents with differing education levels within this sample of magazine readers for readership and response actions for DTC advertisements although a small but significant difference is noted for a couple of attitudinal beliefs: those with a middle education level (that is, some college education) had somewhat less positive attitudes toward DTC advertisements than those with higher (college education) or lower education levels (high school or less). Those with middle education level less often feel DTC advertisements provide more important information than regular advertising than those in other educational groups (56 percent versus 64 percent,  $p < .01$ ), or feel DTC are easier to understand (39 percent versus 46 percent,  $p < .05$ ).

Annual household income levels did not seem to influence attitudes, readership, or response to DTC advertisements among these respondents with one exception: lower income respondents with less than \$30,000 annual family income claim to be less likely to insist that their doctors prescribe a specific medication they saw advertised (13 percent) as compared to those with higher incomes of \$30,000 or more (at about 20 percent,  $p < .05$ ).

**Rx drug usership: Self.** About a third of the total sample claimed to be currently (at the time of data collection) taking a medication prescribed by a doctor. As shown in Table 2, prescription drug users, as compared to nonusers, consistently show more positive reactions, readership, and response levels to DTC advertisements. Prescription drug users feel DTC advertisements communicate more important information than regular advertising

and are more believable and easier to understand than do nonusers. They also tend to read DTC advertisements in general, as well as when the advertisement is for a symptom they or their family members may have, and they read disclaimers in these advertisements more regularly than nonusers read them. Keeping in line with these interests, prescription drug users are significantly more likely to ask their doctors about a specific medication they saw advertised and are also more likely to insist that their doctor prescribe a specific medication that they saw advertised than nonusers.

**Rx drug usership: Self/family.** Part of the sample (475 respondents) in later studies were also asked about the usership of prescription drugs by other family members in addition to using prescription drugs themselves, to explore if family health issues may influence reactions and response to DTC advertisements. Just over half of the sample (52 percent) report either they themselves or someone in their immediate family was currently taking a prescription drug: about 1 in 10 respondents (10 percent) have a family member only using a prescription drug, another 18 percent reported that they themselves, but no family member, was using a prescription drug, and about a quarter of the sample (24 percent) said that both they as well as another family member was using a prescription drug. Results of this more "involved" prescription drug user group were compared to the noninvolved group who did not use a prescription drug and had no family member using one.

Results show (see Table 2) that these more involved respondents consistently show more interest in DTC advertisements overall as compared to respondents who are not using/have family members using such drugs. For example, their attitudinal reactions toward DTC advertisements are con-

sistently more positive. Their readership levels are significantly higher for the advertisements as well as disclaimers, in general, and when the advertisement is about symptoms they or their family members may have. Additionally, they are also significantly more likely to ask doctors about the advertised medications *as well as* insist on prescriptions based on the advertisements they saw.

### Recall of DTC advertisements

**Total sample and subgroups.** About 1 in 10 respondents recalled seeing at least one prescription drug advertisement in the test magazine issue they read the previous day when cued by the brand name. As shown in Table 3, recall levels for DTC advertisements are significantly higher for the older respondents, 45+ years of age, showing their generally higher interest in DTC advertising as compared to younger respondents, and among those who use DTC drugs as well as those who use/have family members who use DTC drugs compared to those who do not. Recall levels for DTC advertisements are not found to be influenced by income or education levels for this target of respondents.

### Reactions, readership, response, and recall: Interrelationships

**Reactions, readership, response.** The relationship between DTC-related attitudinal reactions, claimed readership, and response behaviors toward doctors were examined in the study. Results show that there is a significant impact of attitudinal reactions on claimed readership of DTC advertisements. Respondents with more positive attitudes toward DTC advertising report higher levels of DTC advertising readership: about 41–47 percent of those with positive attitudes related to importance, believability, and ease of understanding prescription drug advertisements regu-



**TABLE 3**  
Recall of Specific Prescription Drug Advertisements

Rx Advertising Recall Levels*							
Total Sample	By Ages Groups (yrs)			By Rx Drug Usership: Self/Family**			
	a	b	c	d	e	f	g
	18-34	35-44	45+	Self: User	Self: Nonuser	Self or Family: User	Self or Family: Nonuser
(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
10	9	7	18ab	16e	7	17g	7
(Base) (1,475)	(686)	(421)	(326)	(500)	(968)	(248)	(227)

\*Respondents who proved recalling specific Rx magazine advertisements the day after exposure when cued by brand name.

\*\*Partial sample asked about family usership of Rx drugs.

a-f: Significantly higher than subgroup marked with that letter at the 95% confidence level.

a-f: Significantly higher than subgroup marked with that letter at the 99% confidence level.

larly report reading DTC advertisements compared to 8–20 percent with moderate to negative attitudes in these areas ( $p < .01$  for all measures). Further, not surprisingly, attitudes toward DTC advertisements and claimed readership of such advertisements also show significant impact on the measures related to asking the doctor about these advertisements or insisting on prescriptions for the advertised products. Those who have more positive attitudes and report reading such advertisements more regularly are also significantly more likely to ask their doctors about advertised drugs and insist on prescriptions ( $p < .01$  for all measures).

**Recall.** The impact of Rx attitudes, readership, and response on proved recall of specific DTC advertisements the day after exposure was also explored in the study. Results show that some attitudes, those related to feeling that DTC advertisements offer more important information than regular advertisements, and to some extent, the believability of these advertisements has an impact on recall of specific advertisements (see Table 4). Additionally, claimed

readership of DTC advertisements was found to significantly influence recall of specific advertisements: Significantly higher proportions of respondents who report reading print DTC advertisements regularly recalled specific magazine DTC advertisements the day after exposure (17 percent) compared to those who say they read such advertisements less often (11 percent) or almost never (5 percent,  $p < .01$ ), as shown in Table 4. Also, those who are more likely to ask their doctors about a specific advertised drug recalled DTC advertisements significantly more often (16 percent) as compared to those who may or may not ask (7 percent) or those who are unlikely to ask their doctors (4 percent,  $p < .01$ ). There is no significant difference among those who are more likely or less likely to insist on receiving a prescription from their doctor about an advertised drug on their recall of a DTC advertisement.

#### DISCUSSION, LIMITATIONS, AND IMPLICATIONS

**Discussion.** Results show that respondents say that they generally value DTC

advertising: a majority of the respondents feel these advertisements provide more important information than regular advertising and many also find these advertisements are believable; some feel they are easy to understand while others feel DTC advertising underplays the serious nature of the category. Attitudinal reactions are generally more positive among older respondents, and substantially more positive among those more involved with the category, that is, those who themselves use or have an immediate family member using a prescription drug.

Claimed readership levels for DTC advertisements in newspapers and magazines are substantial, and respondents report significantly higher interest and readership of DTC advertisements if the advertisement is about a symptom the respondent, or a family member, has or may have. Results also show that a large majority of respondents who report regularly reading DTC advertisements also say they regularly read the disclaimers in small print in these advertisements. It is not clear if this includes only disclaimers made on the main page of the adver-

**TABLE 4**  
Recall by Reactions, Readership, and Response

	Rx Advertising Recall Levels*		
	By Reactions and Attitudes		
	Strongly Agree/ Agree (%)	Neither Agree/ Disagree (%)	Strongly Disagree/ Disagree (%)
<i>Prescription drug advertisements . . .</i>			
Communicate more important information than regular advertising	12a	8	9
Are more believable than regular advertising	12a	8	9
Are easier to understand than regular advertising	11	10	11
Underplay the serious nature of prescription medication**	13	11	13
	By Readership		
	Almost Always/ Usually Read (%)	May/May Not Read (%)	Almost Always/ Usually Skip Them (%)
<i>When you see advertisements for prescription medications . . .</i>			
In magazines or newspapers	17a	10	5
For a symptom that you may have or may think you have	14a	9	4
For a symptom that one of your immediate family members have	16a	11	3
Disclaimers printed in the small letters with the advertisements	14a	11	7
Disclaimers printed in the small letters with the advertisements . . . for a symptom that you may have or think you may have	13a	11	6
	By Response		
	Very/Somewhat Likely Ask/Insist (%)	May/May Not Ask/Insist (%)	Definitely/Probably Not Ask/Insist (%)
<i>How likely would you be to . . .</i>			
Ask your doctor about a specific medicine or treatment that you saw advertised	16a	7	4
Insist that your doctor prescribe a specific medicine or treatment that you saw advertised	12	11	10

\*Respondents who proved recalling specific Rx magazine advertisements the day after exposure when cued by brand name.

a: Chi-square test of recall by the specific measure shows significance at 95% confidence level.

a: Chi-square test of recall by the specific measure shows significance at 99% confidence level.

tisement or those at the back of the advertisement as well. It would be worth including follow-up questions in future studies to fully understand the extent to which disclaimers and risk-related information are read by readers of prescription drug advertisements. Further, the results of this study also show that readership levels for DTC advertisements and the disclaimers in these advertisements increase with age and are significantly higher among respondents who are more involved with the category based on usership of prescription drugs by self and/or family members.

DTC advertisements seem to generate considerable interest in getting people to talk to their doctors about the drug or treatment that was advertised: a substantial proportion of respondents report they are likely to ask doctors about advertised drugs they have seen. These levels, once again, are significantly higher among the older respondents, 45+ years of age, and among users of prescribed drugs or those who have family members using such drugs.

Some respondents also say they are likely to insist on prescriptions based on what they saw advertised. Age does not have an impact on the level of insistence on prescriptions, and older respondents who are more interested in DTC advertisements are not more likely than younger respondents to insist on prescriptions. Usership of prescription drugs by self and the family, however, significantly influenced the extent to which respondents are likely to insist that their doctor prescribe an advertised drug: Users and respondents with family members using prescription drugs are substantially more likely to insist on prescriptions than those who are not using any DTC products.

Attitudinal reactions, and reported/claimed readership and response to DTC advertisements, are clearly influenced

**. . . older individuals and those who are already involved with the category . . . are significantly more interested in this category of advertising and are a significantly more responsive target group.**

by external demographic variables of age and involvement with the category in terms of usership of prescription drugs by self/family. Additionally, it seems that respondents' attitudinal reactions to DTC advertisements influence how likely they are to read advertisements, and some of these attitudes and the claimed readership levels for these advertisements significantly influence recall of specific DTC advertisements. This interest in reading and remembering DTC advertisements is important to respondents when they expect to ask doctors about what they read or saw advertised and, for some, when they feel they need to obtain a prescription for the advertised medication.

**Limitations and future directions.** Reactions to only print advertising were explored in this study. Reactions and response to other media advertising, especially television advertising, are needed in this area, and future researchers need to evaluate media differences, if any, for this category of product. It is possible that reactions to DTC commercials influence people's attitudes differently from print advertisements, given the structural differences that have been mandated about the information each medium presents.

Additionally, and importantly, the results of the present study are based on a sample of women only, regular magazine readers from 30 selected markets, who are also younger, more educated, and have higher incomes as compared to the gen-

eral population of women in the country. While this is an appropriate sample to study reactions to magazine advertising, future researchers need to explore these findings among *all* women, as well as among men to evaluate differences in results by sex.

**Implications.** These results suggest that DTC advertising is perceived as valuable by women magazine readers who feel that these advertisements offer them the opportunity to get information, be positively involved in their treatment options, and encourage more informed discussions with their doctors about prescription products. Some respondents, however, feel the advertisements underplay the serious nature of prescription medications while some others do report using this advertising to put pressure on doctors to prescribe advertised drugs. The study results also show that older individuals, and those who are already involved with the category because of use by self or immediate family members, are significantly more interested in this category of advertising and are a significantly more responsive target group.

Respondents with more positive attitudes to DTC advertisements also report higher readership levels for such advertisements and some of these attitudes also influence recall of specific DTC advertisements on the day after exposure. Respondents with higher claimed readership levels of DTC advertisements also recall more specific DTC advertisements they were

exposed to the day before and report that they are more likely to ask their doctor about these products.

Overall, these findings should add to the knowledge base on how DTC advertising is read and used. This should help in planning the scope and content of future DTC advertising messages. Certainly, print DTC advertisements fulfill important societal needs by better educating consumers about health and drugs and encouraging a more informed dialogue with their doctors. At the same time, some people feel these advertisements underplay the risks, and others may take the information too simplistically, to the point of supplanting a doctor's advice and causing some consumers to be more likely to insist that doctors prescribe the advertised drugs. So more may need to be done to better balance these competing desirable and undesirable outcomes. The better consumers understand how to interpret and use this information, the more value it will have for society as well as the industry as a whole. **JAR**

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## APPENDIX

### Sample Demographics

	Respondents (%)
<b>Age (years)</b>	
18-34	47
35-44	28
45+	22
<b>Education</b>	
High school or less	36
Some college	31
College graduate	32
<b>Income</b>	
<\$30K	22
\$30K to <\$50K	37
\$50K or more	41
<b>Sex</b>	
Female	100

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