Disease-specific direct-to-consumer advertising for reminding consumers to take medications

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Abstract

Objective: To assess the relationship between disease-specific direct-to-consumer (DTC) advertising, via traditional advertising effectiveness measures, and consumers' self-reported medication-taking behavior.

Methods: Data were gathered for 514 respondents (age 18 and above) using an online survey panel. Participants were exposed to a disease-specific (i.e., nonbranded) DTC advertising for depression. The advertising stimulus created for the study was based on the Food and Drug Administration guidelines for disease-specific DTC advertising and modeled after current print disease-specific DTC advertising. Participants reviewed the advertising stimulus through the online program and then responded to a questionnaire containing closed-ended questions assessing the constructs. Data were analyzed using chi-square tests. All tests were interpreted at an a priori alpha of 0.05.

Results: Significantly more respondents who were highly involved, paid more attention to the advertisement, and were responsive to DTC advertisements in the past indicated that the disease-specific DTC advertising stimulus reminded them to take their depression and other medications.

Conclusion: These exploratory results show disease-specific DTC advertising can help people remember to take their prescription medication when viewed, which may lead to more positive medication-taking behavior and increased medication adherence. Additionally, given the fair balance and legal issues surrounding product-specific DTC advertising, disease-specific DTC advertising can serve as an effective component of the marketing mix for pharmaceutical manufacturers. Future research should attempt to study the impact of disease-specific DTC advertising on consumers' actual medication adherence using standardized adherence measures such as prescription records.

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In the last 10 to 15 years as lawsuits (e.g., off-label marketing), product withdrawals, and negative public perception has mounted[1,2] and market dynamics have continued to change, pharmaceutical manufacturers have shifted some of their marketing/advertising focus from product-specific (e.g., Enbrel) direct-to-consumer (DTC) advertising to disease-specific DTC advertising (also known as help-seeking or nonbranded advertising).[3–5] In addition, the health care system continually battles the global issue of medication adherence, which imposes a severe financial burden on the health care system[6–9] and can potentially lead to suboptimal health outcomes, decreased quality of life, and increased mortality. Various reminder strategies, including DTC advertising, could theoretically have a positive impact on patient medication adherence and improve health outcomes. However, the relationship between DTC advertising and medication adherence has not been empirically measured, but only mentioned based on theory and logic.[10–12]

Objectives

The objectives of this research were to assess the relationship between disease-specific DTC advertising via traditional advertising effectiveness measures and consumers' self-reported medication-taking behavior.

Methods

The following hypotheses were tested:

H_0. There is no significant difference in remembering to take (a) depression or (b) any other prescription medication among consumers:

1. With varying levels of disease-state involvement (high versus low).
2. Who paid more attention compared with less attention to DTC advertising.

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3. Who talked with their physician about a medication they had seen advertised in the past 6 months compared with the consumers who did not talk with their physician about a medication they had seen advertised in the past 6 months.

Qualtrics consumer panel and online survey software were used to recruit study participants and collect data for 514 participants (over the age of 18). Qualtrics maintains a consumer panel database. Participants are not paid for answering surveys but are given reward points for surveys completed that go toward redeemable items such as retail gift cards.

Respondents were included if identified as suffering from at least mild depression based on their Patient Health Questionnaire score.[13,14] Physicians, pharmacists, and employees of an advertising/market research agency were excluded from this study. Eligible participants were exposed to a disease-specific DTC advertising for depression that mirrored what they would see in a print advertisement and then asked to respond to an online questionnaire.

The disease-specific advertisement was created according to the Food and Drug Administration guidelines.

Key Points

Background:

- The health care system continually battles both the negative clinical and financial effects of lower than optimal medication adherence.
- Recently, pharmaceutical manufacturers have shifted some of their marketing/advertising focus to disease-specific direct-to-consumer advertising.
- Past research has postulated direct-to-consumer advertising could serve as a reminder for individuals to take their medications.

Findings:

- Respondents with high levels of disease state involvement, who had paid greater attention to the advertisement, and who had discussed an advertised medication with their physician in the past reported the advertisement reminded them to take their depression and any other medication significantly more than their respondents with differing characteristics and behaviors.
- Disease-specific direct-to-consumer advertising can serve as a possible reminder about medications and, thus, possibly lead to increased medication-taking behavior.

This study was exempt from full institutional review board evaluation and approved as such.

The independent variables used in the study included: disease state involvement, amount of attention paid to the advertisement, and past discussion of an advertised prescription drug with a physician. Involvement has been shown to be a significant predictor of consumer response to DTC and both attention paid to the advertisement and past responses to DTC advertisements are traditional measures of advertising effectiveness.[4,5,15] The level of disease state involvement was measured using Zaichkowsky's Personal Involvement Inventory,[16] a reliable and validated 10-item, 7-point semantic differential scale. Respondents were divided into high and low involvement level groups based on the median-split method. Attention paid to the advertisement was measured using a 5-item, 5-point Likert-type scale (ranging from very little to very much), which has been validated and which reported high internal consistency.[17,18]

Using the median-split method, respondents were divided into two attention groups—more versus less. Using a yes/no, dichotomous answer choice, respondents then indicated if they discussed a prescription drug they had seen advertised with their doctor in the past 6 months. Using the same yes/no dichotomy, the dependent variables were whether viewing the disease-specific DTC advertisement for depression reminded them to take their depression medication (if they were currently diagnosed with depression) or any other prescription medication that day.

Given the categorical nature of the independent and dependent variables, chi-square tests were performed to test the research hypotheses and identify if a relationship exists between the described variables. An a priori alpha level of 0.05 was used to determine a statistically significant difference.

Results

Confirmatory *t* tests were performed to check if participants were assigned to the appropriate groups—high versus low involvement and more versus less attention, with both groups being significantly different ($P < 0.001$). In terms of demographics, the sample was split between men (49.6%) and women (50.4%) respondents and evenly distributed among age, race, education, and income. Nearly 54% of the sample (n = 276 respondents) was currently using a prescription medication for depression and 76% (n = 392) of the sample was taking any other prescription medication. High internal consistency was demonstrated by both involvement (coefficient alpha = 0.92) and attention paid to the advertisement (coefficient alpha = 0.84) scales.

The chi-square analysis results are summarized in Tables 1 (n = 276) and 2 (n = 392). Compared with low involvement respondents, significantly more high involvement respondents reported that the advertisement