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Attitude Toward Direct-to-Consumer Advertising and Drug Inquiry Intention: The Moderating Role of Perceived Knowledge

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This study examined how consumers’ general attitude toward direct-to-consumer advertising (DTCA) influenced their drug inquiry intent, and whether the relationship between attitude toward DTCA and drug inquiry intent was moderated by their perceived knowledge of health and medicine. Results showed that those with favorable views of DTCA were more likely to inquire and request an advertised drug they saw. The effect was greater in magnitude for consumers with high perceived knowledge in health and medicine, however, than for those with low perceived knowledge.

Direct-to-consumer advertising (DTCA) has been the subject of increasing debate in the past decade. Proponents claim that DTCA raises awareness about diseases and educates consumers, while opponents contend that DTCA fuels the rise in drug consumption. With the DTCA expenditure reaching more than $4 billion in 2004 (Kaiser Family Foundation, 2005), how DTCA affects consumers’ health decision-making process becomes a key issue. A number of studies indicate that DTCA motivates people to visit their doctors (Food and Drug Administration [FDA], 1999, 2002; Lehrer et al., 2000; Slaughter & Schumacher, 2001; Weissman et al., 2003) and stimulates demand for prescription drugs (see Narayanan, Desiraju, & Chintagunta, 2004).

As DTCA-induced drug inquiry is on the rise (Gatti, 2003), consumers’ attitude toward DTCA and its effect on drug inquiry behavior have drawn increasing attention. Research shows that those with positive views of DTCA are more likely to ask their physician about an advertised drug or medical conditions, or request the drug (Deshpande, Menon, Perri, & Zinkhan, 2004; Herzenstein, Misra, & Posavac, 2005; Peyrot, Alperstein, Van Doren, & Poli, 1998; Singh & Smith, 2005). Some studies, however, did not find any significant associations between positive attitude toward DTCA and high drug inquiry intention (Perri & Dickson, 1987; Williams & Hensel, 1995). Williams and Hensel’s (1995) study was based solely on adults over 59 years of age, and their positive attitude toward DTCA was not linked to increased drug

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inquiry via physician. Instead, it significantly was related to asking friends or pharmacists. The older adults’ apparent preference for more intimate sources suggests that some consumers are reluctant to ask their doctor about an advertised drug, despite their positive attitude toward DTCA.

With a rise in “medical consumerism” (Menon, Deshpande, Perri, & Zinkhan, 2002, p. 29), consumers’ active participation in health decision making often is assumed. There is a segment of consumers, however, who are hesitant to take an initiative in health decision making (see Cassileth, Zupkis, Sutton-Smith, & March, 1980; Thompson, Pitts, & Schwankovsky, 1993; Waterworth & Luker, 1990). It remains unanswered how their positive attitude toward DTCA influences drug inquiry intent, as opposed to the medically sophisticated and active consumers.

The purpose of this study is to examine how consumers’ general attitude toward DTCA influences their drug inquiry intent, and whether the relationship between attitude toward DTCA and drug inquiry intent is moderated by their perceived knowledge of health and medicine. Even with a positive attitude toward DTCA, those who view themselves as not knowledgeable may not ask or request the advertised drug from their physicians as eagerly as those with high perceived knowledge. Given the structure of the prescribing process, a positive attitude toward DTCA is not sufficient to make consumers try an advertised drug, unlike other product purchase decisions. Among those with positive views of DTCA, drug inquiry intent will vary with their willingness or readiness to talk to physicians.

As proponents argue, if DTCA encourages consumers’ participation in their health decisions by providing information about treatment options, it is important to know whether DTCA stimulates those who do not perceive themselves as knowledgeable but value the DTCA information. The ongoing debate on functions of DTCA will benefit greatly from examination of DTCA effects in relation to different levels of consumers’ perceived health knowledge.

General Attitude Toward DTCA as a Key to Behavioral Intention

General attitude toward advertising is an important determinant of behavioral outcomes such as purchase intention, influencing attitudes toward a specific ad or brand (Lutz, 1985; MacKenzie & Lutz, 1989; MacKenzie, Lutz, & Belch, 1986; Mitchell & Olson, 1981). People with more favorable attitudes toward advertising in general tend to view specific advertisements as more acceptable, informative, and enjoyable (Bartos & Dunn, 1974; Bauer & Greyser, 1968; Lutz, 1985). Specifically, people with a positive attitude toward advertising in general tend to spend more time looking at ads (James & Kover, 1992), recall more advertisements (Donthu, Cherian, & Bhargava, 1993; Mehta, 2000; Mehta & Purvis, 1995), and are more persuaded by them (Mehta, 2000).

Although the scope and measurement of attitude toward advertising in general have varied widely in the literature (see Mehta, 2000), it generally is defined as a “learned predisposition to respond in a consistently favorable or unfavorable manner toward advertising in general” (MacKenzie & Lutz, 1989, pp. 53–54). It should be distinguished from attitude toward a specific ad or beliefs toward advertising (see Lutz, 1985; MacKenzie & Lutz, 1989; Muehling, 1987). Various beliefs toward advertising determine one’s attitude toward advertising in general, and an individual’s reactions to a specific ad are shaped by his or her general attitude toward advertising (Andrews, 1989; Lutz, 1985; MacKenzie & Lutz, 1989; Muehling, 1987).
This study focuses on attitude toward DTCA in general, measuring one’s overall affect toward DTCA.

Examining the link between global attitude toward DTCA and behavioral intention warrants special scholarly attention, given the unique role of DTCA concerning public health. Before the rapid growth of DTCA, health care decisions, especially on therapeutic options, revolved around physicians and were dominated by a unidirectional information flow from physician to patient (Deshpande, Menon, Perri, & Zinkhan, 2004; Gafni, Charles, & Whelan, 1998). Direct-to-consumer advertising (DTCA) contributed to a shift from the traditional “paternalistic process” of health care decision making to a more “shared decision-making process” (Deshpande et al., 2004, p. 501).

The increasing visibility of DTCA has created an entirely new dimension in the role of consumers who have information at their disposal (Smith, 1998). Consumers are becoming more medically sophisticated and active than ever before (Singh & Smith, 2005). Traditionally, doctors introduced therapeutic options to patients. Now it is likely to be DTCA that talks directly to consumers. If consumers value the information with a favorable attitude toward DTCA, the “shared decision-making process” will be more likely to occur. As such, consumers’ attitude toward DTCA is a key to their behavioral intentions.

Herzenstein and Colleagues (2005) found that consumers’ general attitude toward DTCA was a significant factor influencing the likelihood of whether they ask their physicians about advertised drugs. Although studies used somewhat different measures of attitude toward DTCA, findings generally indicate that consumers with more favorable attitudes toward DTCA were more likely to search for additional information about the advertised drug and to ask their physicians about it (Deshpande et al., 2004; Herzenstein et al., 2005; Peyrot et al., 1998; Singh & Smith, 2005). Two studies (Perri & Dickson, 1987; Williams & Hensel, 1995) did not detect any significant differences in terms of attitude toward DTCA between those who asked their physician questions about the advertised drugs and those who did not. The studies were conducted, however, before the FDA relaxed the requirements for broadcast advertisements in 1997. As a result of higher visibility of DTCA, consumers’ attitude toward DTCA is assumed to be different now. Furthermore, Williams and Hensel’s (1995) study was based on adults over 59 years old.

We can expect that people with a favorable attitude toward DTCA in general will view specific advertisements as more acceptable and informative, leading to greater influence on behavioral intention. The following hypotheses regarding the main effect of general attitude toward DTCA are presented:

Hypothesis 1: People with a more favorable attitude toward DTCA are more likely to ask their doctors about an advertised drug than people with a less favorable attitude toward DTCA.

Hypothesis 2: People with a more favorable attitude toward DTCA are more likely to insist on prescription of an advertised drug than people with a less favorable attitude toward DTCA.

More importantly, this study investigates a contingent condition under which the effect of attitude toward DTCA will differ. The following section explains the role of consumers’ perceived health knowledge in the relationship between general attitude toward DTCA and behavioral intention.
Moderating Role of Perceived Health Knowledge

To better understand the effect of attitude toward DTCA on behavioral intention, it is important to consider the unique decision-making process where the consumer does not have ultimate authority on the purchase. It is very likely that those with positive attitudes toward advertising for shampoo and automobiles will purchase the advertised shampoo at their expense and take a test drive by visiting a car dealer. It is logical to assume, however, that consumers’ positive attitude toward DTCA cannot be linked to the purchase unless they are ready to inquire about an advertised drug via their physician. It is essential to consider key factors affecting consumers’ ability or readiness to talk to their doctors.

As Fazio (1989, p. 176) stated, “Not all attitudes are equal” in terms of their impact on perception and behavior. The likelihood of behavioral outcomes is moderated by a dimension of strength such as confidence or knowledge (Petty & Krosnick, 1995). Knowledge makes people feel more confident of their attitudes and thus may make these attitudes predictive of behavioral intentions. Attitudes with high confidence or knowledge are more likely to be acted upon (see Berger, 1992; Fazio, 1986; Zanna & Rempel, 1988). Positive attitudes toward DTCA more easily can be linked to drug inquiry when a person feels knowledgeable in health and medicine.

Consumers who have favorable views of DTCA in general will have a higher likelihood of inquiring about the advertised drug than those with unfavorable views of DTCA, but they hold the predisposition with a varying degree of confidence or knowledge. Those who view themselves as knowledgeable in health and medicine are more likely to actively initiate the discussion with their doctors than those who perceive themselves as not knowledgeable. Due to low self-efficacy, it will be more difficult for those who perceive themselves as not knowledgeable to broach the issue to their doctors. These consumers will be rather deferential to doctors’ recommendations and initiatives, similar to the patient category of “deferrers,” who tend to accept a doctor’s treatment without much deliberation (Pierce, 1993, p. 25).

Results of an FDA survey show that some consumers are indeed afraid to ask their physicians about an advertised drug: About 3% of consumers believed that their doctors would get angry or upset if they asked about a prescription drug they had seen advertised (FDA, 2002). In fact, 4% of consumers who actually had inquired about an advertised drug described their doctors’ reaction as, “He/she seemed to get angry or upset” (FDA, 2002). A more recent FDA survey (2004) shows that 10% of patients were reluctant to inquire about an advertised drug, fearing that the inquiry may imply distrust of their doctors (FDA, 2004). Waterworth and Luker (1990) pointed out that some patients were more concerned with pleasing their physician than with actively participating in decisions for their care.

We expect that those with a favorable attitude toward DTCA and high perceived knowledge will manifest stronger intention of asking and requesting the advertised drug than those with positive views but low perceived knowledge. These consumers are more like “deliberators” (Pierce, 1993, p. 25) or the “I demand you do…” (Rowland & Holland, 1989, p. 201) type of consumers who weigh the pros and cons of each treatment option with their physicians.

This study focuses on perceived health knowledge, not actual health knowledge. A recurrent theme in health behavior theory is the important role of perception as an antecedent of behavioral intent (Rock, Ireland, Resnick, & McNeely, 2005). Studies (Phillips, 1993; Radecki & Jaccard, 1995; Rock, Ireland, Resnick, & McNeely, 2005)
found that perceived knowledge was a significant factor affecting condom use and HIV testing intent. Similarly, an individual’s subjective assessment of his or her knowledge in health and medicine will play a significant role in drug inquiry and request intent. Health knowledge is defined as “the extent to which consumers have enduring health-related cognitive structures,” indicating their proficiencies for performing preventive health behaviors (Moorman & Matulich, 1993, p. 210).

In highly involved purchase categories, perceived knowledge carries more weight in terms of its effect on behavioral outcomes than in less-involved purchase categories (Berger, Ratchford, & Haines Jr., 1994). With little knowledge or confidence, individuals are not willing to try out new alternatives despite their positive attitudes (see Davidson, Yantis, Norwood, & Montano, 1985; Wood, 1992). In the context of DTCA, although they value the information, those with low perceived knowledge will not ask or request the advertised drug from their physicians as eagerly as those with high perceived knowledge. Self-perceived knowledge in health and medicine will be a key factor moderating the relationship between attitude toward DTCA and drug inquiry intention. The following hypotheses are presented:

Hypothesis 3: Perceived knowledge will have a moderating effect so that the relationship between attitude toward DTCA and asking their doctors about an advertised drug will be stronger among those with high perceived knowledge.

Hypothesis 4: Perceived knowledge will have a moderating effect so that the relationship between attitude toward DTCA and insisting on prescription of an advertised drug will be stronger among those with high perceived knowledge.

Method

Telephone Survey

To examine how consumers’ attitude toward DTCA influences their drug inquiry/request intent and whether perceived knowledge functions as a moderator, telephone surveys were conducted. The population of interest was adults 18 years or older. Phone numbers were randomly selected from a phone directory of a Midwestern town with a total population of about 50,000. A systematic random sample was constructed by estimating the number of residential listings contained in the directory, determining sampling interval, and selecting numbers with a random start number (Dillman, 1978). A total of 300 primary numbers were selected, with 3 alternate numbers for every primary number. Interviewers were trained to try alternate numbers only when they failed to contact an adult with the primary number. A total of 203 residents were interviewed, with a response rate of 68%. Median age was 39 and Table 1 shows major sample characteristics.

Compared with the 2003 U.S. population estimates (U.S. Census Bureau, 2003), females were oversampled. The median age and marital status were close to the estimate of U.S. population characteristics. This sample, however, showed much higher education levels than the general U.S. population. Based on the 2003 estimate, 27% of the U.S. population had bachelor’s degrees or higher, compared with 52% of the current sample. The high education level, however, was the major characteristic of
the Midwestern college town sampled. Most demographic characteristics except gender, were quite representative of the area from which the sample was drawn.

The phone interviews assessed the following key factors: (1) drug inquiry intention after DTCA exposure, (2) drug request intention after DTCA exposure, (3) attitude toward DTCA in general, (4) perceived knowledge in health and medicine, (5) interest in health information, and (6) demographic information.

**Dependent Variables**

Two outcome variables were drug inquiry intent and drug request intent. The degree of drug inquiry intention involves the likelihood of talking to a physician about an advertised drug that consumers saw. It was measured as, “How likely would you be to ask your doctor about a specific prescription medicine or treatment that you saw advertised on a scale of 1 (not likely at all) to 5 (very likely)?”

The degree of drug request intention measures the level of insistence on a specific drug they saw advertised. The respondents were asked, “How likely would you be to insist that your doctor prescribe a specific prescription medicine or treatment that you saw advertised on a scale of 1 (not likely at all) to 5 (very likely)?”

**Independent Variables**

To measure general attitude toward DTCA, two items asking their overall affect toward DTCA were used (z = .82): (1) “Overall, I like ads for prescription drugs” and (2) “My general opinion of prescription drug ads is favorable.” The two items were measured on a scale of 1 (strongly disagree) to 5 (strongly agree).

To examine perceived knowledge in health and medicine, respondents were asked, “How knowledgeable would you say you are about health and medicine? Would you say you are: (1) Not at all knowledgeable, (2) Somewhat knowledgeable, (3) Very knowledgeable, or (4) Extremely knowledgeable.”

### Table 1. Sample characteristics

<table>
<thead>
<tr>
<th>Gender</th>
<th>Female 61%</th>
<th>Male 39%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>Grade school or less .5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High school incomplete 1.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High school graduate 12.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Some college 31.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>College graduate 27.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Postgraduate or higher 24.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refuse to answer 3.0</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td>Married 52.7%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Single 33.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Widowed 6.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Divorced 3.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Separated .5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refuse to answer 3.9</td>
<td></td>
</tr>
</tbody>
</table>

N = 203.
Control Variables

Key factors affecting health-information-seeking behavior should be taken into consideration to test the hypothesized relationships. Interest in health information, age, education, and gender are key variables determining one’s motivation and ability concerning health information acquisition behaviors (Moorman & Matulich, 1993). Prior research shows that women, older consumers, and the educated are more involved in health-related issues (Huh, Delorme, & Reid, 2004; Kahn, 2001; Perri & Nelson, 1987). In particular, we expect that the higher people’s level of interest in health information, the more likely they are to inquire and request an advertised drug they saw. Interest in health information was measured by the question, “How interested are you in getting information about health and medicine? (1) None, (2) Very little, (3) Some, (4) Quite a bit, or (5) A great deal.”

Results

Descriptive Statistics

As shown in Table 2, average perceived knowledge in health and medicine was 2.4 on a 4-point scale. Interest in health information had an average of 3.1 on a 5-point scale. This sample showed moderate-to-high levels of perceived health knowledge and interest. Average drug inquiry intention was 3.2 on a 5-point scale. People appeared to be very reluctant, however, to insist on prescription of a specific drug they saw advertised. Average drug request intention was much lower than drug inquiry intention, 1.9 versus 3.2. More people were willing to ask their doctor about an advertised drug, but fewer people were willing to insist on prescription.

General attitude toward DTCA, calculated as a mean score of two items, was slightly on the negative side (mean = 2.3). Table 2 shows that on a 5-point scale, average score for “Overall, I like ads for prescription drugs,” was 2.1 and “My general opinion of prescription drugs is favorable” was 2.5.

Drug Inquiry Intention

Table 3 presents the results of hierarchical regression on drug inquiry. Attitude toward DTCA and perceived knowledge were centered (see Aiken & West, 1991). Centering variables for an interaction minimizes the multicollinearity problem (Neter, Wasserman, & Kutner, 1989). With regard to the dependent measure, “How likely would you be to ask your doctor about a specific prescription medicine

<table>
<thead>
<tr>
<th>Table 2. Descriptive statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>Perceived knowledge in health and medicine</td>
</tr>
<tr>
<td>Interest in health information</td>
</tr>
<tr>
<td>Drug inquiry intention</td>
</tr>
<tr>
<td>Drug request intention</td>
</tr>
<tr>
<td>Overall, I like ads for prescription drugs</td>
</tr>
<tr>
<td>My general opinion of prescription drug ads is favorable</td>
</tr>
</tbody>
</table>
or treatment that you saw advertised?” education, perceived knowledge, attitude toward DTCA, and the interaction term were significant predictors. The first block with demographic variables explained about 6% of total variance. Among them, education was positively related to drug inquiry intention: the higher the education level, the higher people's likelihood of asking their doctor about an advertised drug ($\beta = .15, p < .05$). The second block included interest in health information, which did not approach significance ($\beta = .14, p > .08$).

When perceived knowledge was added into the regression, $R^2$ significantly increased from .09 to .12. Perceived knowledge was a significant factor predicting drug inquiry intention ($\beta = .19, p < .05$). That is, those with high perceived knowledge tend to show high drug inquiry intention. Addition of attitude toward DTCA in general also significantly changed $R^2$ from .12 to .15. Those with a positive attitude toward DTCA in general were more likely to ask their doctor about an advertised drug ($\beta = .15, p < .05$). Hypothesis 1 was supported.

As hypothesized, perceived knowledge moderated the relationship between attitude toward DTCA and drug inquiry intent ($\beta = .16, p < .05$). The positive association indicates that the effect was greater in magnitude for those with high perceived knowledge. While varying perceived knowledge and attitude toward DTCA, a baseline estimate was made for females, holding other variables at their mean. The following regression equation predicting drug inquiry intent was driven with unstandardized regression coefficients (PK: perceived knowledge; ADTCA: attitude toward DTCA):

$$\text{Drug inquiry intent} = 3.32 + .37 \text{PK} + .22 \text{ADTCA} + .27(\text{PK} \times \text{ADTCA}).$$

Three different regression equations were driven for knowledge-mean, knowledge-high, and knowledge-low, corresponding to the mean of knowledge, one standard deviation above knowledge-mean, and one standard deviation below knowledge-mean (see Aiken & West, 1991; Cohen & Cohen, 1983). Similarly, attitude toward DTCA also was calculated for attitude-high, attitude-mean, and attitude-low.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Eq. 1</th>
<th>Eq. 2</th>
<th>Eq. 3</th>
<th>Eq. 4</th>
<th>Eq. 5</th>
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</thead>
<tbody>
<tr>
<td>Block 1 Education</td>
<td>.20**</td>
<td>.18*</td>
<td>.16*</td>
<td>.16*</td>
<td>.15*</td>
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<td>.05</td>
<td>.04</td>
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<td>−.05</td>
<td>−.06</td>
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<tr>
<td>Block 2 Interest in health information</td>
<td>.19*</td>
<td>.12</td>
<td>.12</td>
<td>.14</td>
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</tr>
<tr>
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<td>.18*</td>
<td>.18*</td>
<td>.19*</td>
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</tr>
<tr>
<td>Block 4 Attitude toward DTCA</td>
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<td>.15*</td>
<td></td>
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<tr>
<td>Block 5 Attitude $\times$ Perceived Knowledge</td>
<td>.16*</td>
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<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.06**</td>
<td>.09*</td>
<td>.12*</td>
<td>.15*</td>
<td>.17*</td>
</tr>
</tbody>
</table>

$N = 189.$

$\beta$ values are standardized regression coefficients. $^*p < .05. \quad **p < .01. \quad ***p < .001.$
As Figure 1 shows, the effect of attitude toward DTCA on drug inquiry intent was stronger for those with high perceived knowledge. For those with high perceived knowledge, drug inquiry intent increased from 3.18 to 4.05, while the drug inquiry intent of those with low perceived knowledge stayed about the same, 3.01 to 3.03. A positive attitude toward DTCA was not linked to increased drug inquiry intent for those with low perceived knowledge.

**Drug Request Intention**

Table 4 shows results of hierarchical regression on drug request intention. The first block with demographic variables did not have much explanatory power; none of the factors turned out to be significant. Interest in health information did not reach significance ($\beta = .14, p > .09$). Perceived knowledge was not a significant predictor in explaining drug request intent ($\beta = .07, p > .37$). Unlike drug inquiry intention,

**Table 4. Hierarchical regression on drug request intent**

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Eq. 1</th>
<th>Eq. 2</th>
<th>Eq. 3</th>
<th>Eq. 4</th>
<th>Eq. 5</th>
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<td>.06</td>
<td>.07</td>
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<tr>
<td>Attitude toward DTCA</td>
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<td></td>
<td>.25**</td>
<td>.24**</td>
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<tr>
<td>Attitude $\times$ Perceived Knowledge</td>
<td>.01</td>
<td>.02</td>
<td>.03</td>
<td>.09**</td>
<td>.11*</td>
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<tr>
<td>Total</td>
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</tr>
</tbody>
</table>

$N = 189$.

$\beta$ values are standardized regression coefficients. $^*p < .05$. $^{**}p < .01$. $^{***}p < .001$. 
those with high perceived knowledge were not necessarily more willing to insist on prescription of an advertised drug. As Hypothesis 2 stated, however, a positive attitude toward DTCA predicted a higher likelihood of insisting prescription of a drug from doctors ($\beta = .24, p < .01$). Those with a favorable attitude toward DTCA were more likely to insist on prescription of a specific drug they saw.

Confirming Hypothesis 4, the effect of attitude toward DTCA on drug request intent was significantly moderated by perceived knowledge ($\beta = .15, p < .05$). Similar to drug inquiry intent, the following regression equation predicting drug request intent was driven (PK: perceived knowledge; ADTCA: attitude toward DTCA):

$$\text{Drug request intent} = 1.95 + .10 \text{PK} + .26 \text{ADTCA} + .18 (\text{PK} \times \text{ADTCA})$$

Figure 2 shows three different regression lines for Knowledge-mean, knowledge-high, and knowledge-low. The likelihood of insisting on a specific drug significantly increased from 1.63 to 2.44 when consumers’ perceived knowledge was high. The incremental effect was much smaller for those with low perceived knowledge, however, from 1.76 to 1.98. Only when consumers perceived themselves as knowledgeable was their positive attitude toward DTCA linked to significantly increased drug inquiry intention.

Discussion

Average Americans spend more time exposed to DTCA than with their primary doctor. While Americans talk with their primary physician an average of 15 minutes per year (U.S. Agency for Health Care Policy and Research, 2002), those who watch average amounts of television are estimated to view 30 hours of DTCA annually (Brownfield, Bernhardt, Phan, Williams, & Parker, 2004). Given the significant role of DTCA as a source of health information, its consequences in terms of consumer involvement in health decision making requires a thorough assessment. While DTCA-induced doctor–patient conversation remains controversial, it is worth noting that true consumer empowerment can be achieved from increased involvement by those who do not view themselves as knowledgeable in health and medicine.

Viewing DTCA as a form of public communication, in this article we add an important dimension to the study of attitude toward DTCA. It found a contingent condition in which the effects of attitude toward DTCA on drug inquiry will differ.
Only when consumers’ perceived health knowledge was high did their positive attitude toward DTCA link to an increased desire for drug inquiry and request. To those with low perceived knowledge, favorable attitudes toward DTCA did not significantly boost their drug inquiry and request intent.

As indicated by the FDA’s surveys (2002, 2004), some consumers are hesitant to inquire about advertised drugs because of their doctor’s reaction. In the 2002 FDA survey, 10% of respondents agreed with the statement, “I would not talk with my doctor about an advertisement for a prescription drug, because it would seem like I did not trust my doctor.”

If DTCA fails to stimulate those who perceive themselves as not knowledgeable, results of this study call into question the effectiveness of DTCA toward that segment of consumers. Those who perceive themselves as knowledgeable in health and medicine will be more likely already to be information-rich consumers who weigh the pros and cons of alternative treatment options. If DTCA widens the participation gap between those with high perceived knowledge and with low perceived knowledge, it is important to find ways to narrow the disparities. How much and what kinds of information are consumed by different types of consumers needs more scholarly investigation.

Viewing DTCA as a marketing tool, pharmaceutical companies need to recognize the importance of consumers’ perception toward DTCA in general. Given that numerous nonadvertising factors also may be at work in shaping a consumer’s perception toward DTCA, it will be important to manage positive perceptions of DTCA categorically. More importantly, knowing that consumers’ behavioral intention is not only a function of their attitude toward DTCA but also a function of their perceived knowledge, marketers should pay greater attention to message construction. Many of the broadcast ads are ambiguous in nature, without sufficient information on the benefits and risks of products. The ambiguity may cause those with low perceived knowledge to become reluctant to express their favorable attitude toward DTCA by seeking additional information from their doctor.

This study only considers the likelihood of asking physicians about an advertised drug. It may be possible that those with low perceived knowledge but with positive attitudes toward DTCA may prefer to talk with friends or pharmacists before talking to their doctors. Adults over 59 years old expressed their preference of friends or pharmacists (Williams & Hensel, 1995). More intimate sources can serve as a mediator linking attitude toward DTCA with drug inquiry intention. The inability to weigh various other communication sources is a limitation of this study.

This study is based on a cross-sectional survey. Although the study controlled for key factors such as interest in health information and demographics, the significant association between attitude toward DTCA and drug inquiry does not prove any causal relationship. A longitudinal approach using a panel would benefit future studies, along with a controlled laboratory experiment. Over-representation of females and the educated is another limitation. A more balanced national sample will broaden the generalizability of the results. A single-item measure for perceived health knowledge is an additional limitation. A health knowledge index combining perceived knowledge and objective knowledge will provide a more complete picture.

This study did not investigate why and how those with low perceived knowledge, despite their favorable attitude toward DTCA, are not as eager to talk to their doctors as their counterparts, those with high health knowledge. A qualitative approach using in-depth interviews will provide valuable explanations. In addition, having the
significant effect of attitude toward DTCA in general, further studies can benefit by examining antecedent factors affecting consumers’ general attitude toward DTCA. Beliefs toward DTCA should be distinguished from attitude toward DTCA in general (see Andrews, 1989; Muehling, 1987), which will further our understanding of the proposed link between general attitude toward DTCA and behavioral intentions.

Amid the heated debate on the pros and cons of DTCA, this study indicates a possible inadequacy of DTCA for those who do not view themselves as knowledgeable. For the proponents of DTCA to contend its educational value, it is important to show greater, or at least sufficient, utilization of ad information by this segment of consumers. This article raises attention for a group of consumers with favorable views of DTCA who are somewhat hesitant to talk to their doctors. More research certainly is needed to see why they are hesitant and how we can enhance the informational value of DTCA.

References


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