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# Trust for pharmaceutical company direct-to-consumer prescription medication advertisements

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#### **KEYWORDS**

Trust; Direct-to-consumer advertisements; Asian; Social media; Twitter

#### Abstract

**Objectives:** We are not aware of research on trust for social media direct-to-consumer prescription medication advertisements (DTCA). We study (n = 626) the association of DTCA trust with exposure to DTCA in non-digital print, radio, television, Internet, and social media venues. *Methods:* The 626 participants were asked no/yes questions about their exposure to 17 different types of DTCA advertisements and completed a trust scale for DTCA. Analyses of variance compared trust mean differences for exposure to the different DTCA seen or heard as compared to no exposure to that particular type of DTCA. Multivariate linear regression analyses were performed for trust and adjusted for age, gender, race/ethnicity, and attitudes.

*Results:* Viewing television DTCA was associated with less DTCA trust. Viewing Twitter video or print DTCA were each associated with more DTCA trust. Asian/Asian Americans and South Asians each had more trust for DTCA than Caucasians.

*Conclusions*: Pharmaceutical brand managers should revise their current marketing policy and consider budgeting greater advertising amounts for social media advertising on Twitter. Also, pharmaceutical brand managers should work on improving the trust appeal content on television so that these DTCA are perceived as more trustworthy.

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#### Introduction

Direct-to-consumer prescription medication advertisements (DTCA) are one of the largest sources of promotional spending

\*Correspondence to: Brooklyn College, Murray Koppelman School of Business, Department of Business Management, 2900 Bedford Avenue, 218A, Brooklyn, NY 11210, USA. Fax: +718 951 4385. *E-mail address:* joshua.fogel@gmail.com (J. Fogel). for pharmaceutical companies and consist of 21% of promotional spending [1]. Data from 2001-2010 and 2011-2013 show that television and print DTCA are the bulk of DTCA spending, while Internet DTCA is a much smaller percentage [1,2]. From 2011 to 2013, pharmaceutical companies increased their budget for television (33.99%), magazine (15.09%), and radio (10.96%) DTCA while they decreased their spending for newspapers (36.62%) and Internet (22.34%) DTCA [1]. Social marketing is involved with pharmaceutical marketing of DTCA [3].

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Social media use on the Internet is very popular with 90% of young adults ages 18-29 using social networking websites [4]. Other age groups also use social networking websites with 77% for those ages 30-49, 51% for those ages 50-64, and 35% for those 65 and older [4]. Pharmaceutical companies are aware of this consumer interest in social media and the top 10 worldwide pharmaceutical companies' presence on popular social media included that all 10 had corporate Facebook pages and Twitter feeds while 8 of 10 had a dedicated YouTube channel [5]. Also, rogue pharmaceutical vendors not asking for prescriptions for prescription medications can easily use some of the popular social media for DTCA [6].

The purpose and research objective of this paper is to study trust for DTCA based upon exposure to different types of DTCA. There is limited research on trust for DTCA and to our knowledge there is no research on trust for DTCA on social media. Pharmaceutical companies would be better able to direct their advertising policy by understanding how consumers trust different types of DTCA, including the newer forms of DTCA on social media of Facebook, Twitter, and YouTube. Our methodology is to consider traditional types of DTCA including television, radio, magazines, and the Internet and also the newer forms of DTCA on social media of Facebook, Twitter, and YouTube. We consider relevant variables of age, gender, race/ethnicity, and attitudes and use a multivariate analytical approach to consider the impact of these variables.

This paper provides several contributions. First, we show different patterns of consumer trust for different types of DTCA ranging from traditional DTCA to the newer forms of social media DTCA. Second, we focus on three very popular social media outlets of Facebook, Twitter, and YouTube and study their relationship with trust for DTCA. Third, we provide recommendations for pharmaceutical brand managers on areas to improve perceived consumer trust for their DTCA. Fourth, we recommend for pharmaceutical brand managers to revise their current advertising policy and to dedicate and increase portions of their budget to those social media DTCA types that are perceived by consumers as most trustworthy.

#### Literature review

#### Trust

Trust in non-Internet media DTCA of television, newspapers, and magazines are positively associated with trust in Internet drug information [7]. Increased DTCA website trust is associated with increased behavior intention for a summary measure that included talking to a physician, recommending the website to a friend or family member, and visiting the website again for information [8]. However, another study found that increased DTCA trust for a combined measure of television, magazines, newspaper, radio, and the Internet is associated with decreased behavioral intentions for a summary measure that included talking to a physician, friends or relatives, and seeking information from other media sources about the advertised prescription medication [9]. Consumers that have trust concerns about DTCA do not necessarily apply their trust concerns to particular brands and will obtain prescription medications that they deem are medically necessary to improve their health [10]. Trust in physicians was not significantly associated with consumer response of seeing DTCA, requesting information about advertised products, or requesting the advertised product [11]. Higher trust in DTCA for the HPV vaccine advertisement was associated with greater intentions to receive the HPV vaccine. Those vaccinated had greater trust than those non-vaccinated for DTCA advertisements on television, magazines, and newspapers. However, there were no trust differences for radio or Internet DTCA [12]. Our literature search did not retrieve any research on trust for DTCA on social media.

#### Age

Among college students, those age 25 or less had less positive attitudes toward DTCA than those age 25 and older [13]. However, one national United States study of different age groups reports that age is not associated with trust in online drug information [7]. Also, adults ages 18-49 had greater trust for DTCA than adults ages 50 and greater. The older age group of 50-70 had lower trust for DTCA than either college students ages 18-22 or those ages 23-49 [14].

#### Gender

Women the age of 45 and older are more likely to ask their doctor about a medicine or treatment advertised in comparison to women ages 18-34 or 35-44 [15]. Among college students, men more frequently obtain additional prescription drug information after seeing or hearing DTCA [16]. However, gender did not have any association with trust in advertising media of television, radio, newspaper, magazine, and the Internet [17].

#### Race/ethnicity

Caucasians were more likely than non-Caucasians to use the Internet to seek additional information about DTCA [7]. Hispanics had lower odds than Caucasians that DTCA prompted them to talk with their physicians about changing treatment [18]. Caucasians are significantly more skeptical of DTCA than non-Caucasians [19]. A study of Koreans found that slightly less than half would trust DTCA [20].

#### Attitudes

Positive attitudes towards DTCA decreased from 2003 to 2012 for the attitudes of useful, interesting, enjoyable, helpful, informative, easy to understand, and beneficial [21]. In an online panel with those ages 21 to 81, favorable DTCA attitudes were associated with increased talking to physicians and also increased asking for prescriptions of the advertised medications seen on the Internet [22]. Trust in newspaper, direct mail, and radio advertising were each associated with increased trust in Internet information about prescription medications [23]. All age groups had an association of increased attitudes with increased DTCA trust. However, attitudes differed by age group where college students ages 18-22 only had an association for the attitude of perceived usefulness of DTCA information. Those ages 23-49 had associations for the attitude of perceived usefulness of DTCA information, like to see DTCA ads, and DTCA ads benefit consumers. Those ages 50-70 had

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