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Michael Bliemel

*Dalhousie University*, [m.bliemel@dal.ca](mailto:m.bliemel@dal.ca)

Matthew Ramsay

*University of Toronto*, [matt.ramsay@utoronto.ca](mailto:matt.ramsay@utoronto.ca)

Hesham Allam

*Dalhousie University*, [hesham@dal.ca](mailto:hesham@dal.ca)

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# An Exploratory Study on the Impact of Advertising Intrusiveness on Consumers' Perceptions of Health Information Found on Websites

**Michael Bliemel**  
Dalhousie University  
m.bliemel@dal.ca

**Matthew Ramsay**  
University of Toronto  
matt.ramsay@utoronto.ca

**Hesham Allam**  
Dalhousie University  
hesham@dal.ca

## ABSTRACT

This exploratory research quantitatively tested the impact of inline advertisements in health websites on consumers' perceptions of trust, satisfaction, and adoption intention of health advice, by manipulating advertisements in a mock website for varying degrees advertising intrusiveness.

## Keywords

Online Health Information, Advertising Intrusiveness, Smart PLS, Trust, Information Satisfaction

## Experimental Task and Measures

500 subjects were asked to evaluate one of 5 mock websites containing information adapted from a medical brochure from the Canadian Sleep Society, which contained 13 tips for sleep hygiene. In these 5 sites, we manipulated advertising intrusiveness by changing the flash based inline advertisement. Advertisements used were for a pain relief medication, anti wrinkle cream, adult diapers, and a picture we created for cheap UPPP surgery to fix snoring. We had one control website without ads. Subjects reported their perceptions of the website trustworthiness and satisfaction with the content, as well as how many tips they intended to adopt. Participants were then asked to evaluate the advertisement in terms of intrusiveness.

We used operationalizations of constructs from prior studies for Trust (Jarvenpaa, Tractinsky, & Vitale, 2000), Ad Intrusiveness (Li, et al., 2002), and Satisfaction with Information Quality (McKinney, Yoon, & Zahedi, 2002). In addition to basic demographic questions we collected measures on Browsing Self Efficacy (Torkzadeh & Van Dyke, 2001) and Involvement (Beatty & Talpade, 1994) which were used as controls.

## Results and Discussion

We examined our data using PASW 17 for descriptive analysis and SmartPLS 2.0 for structural modeling and found that advertising intrusiveness negatively influenced consumers' trust of the information contained in the website. The effects of advertising intrusiveness on the trust of the health information were significant at the

$P < 0.01$  level, yet small, with an  $R^2 = 0.21$ . This accounted for the influence of subjects' involvement with the topic of sleep, as well as the subjects' confidence using the World Wide Web. Interestingly, the coefficients for the advertising intrusiveness to trust (-0.26), confidence to trust (0.23), and involvement to trust (0.22) were all roughly the same magnitude, but opposite in sign, suggesting that advertising intrusiveness in health information websites played as large a role as the other two factors. Increased trust with the information led to higher levels of satisfaction with the information quality ( $P < 0.01$ ,  $R^2 = 0.45$ ). Subjects' intention to adopt health advice from the websites was predicated on their involvement with the topic, as well as their satisfaction with the information quality ( $P < 0.01$ ,  $R^2 = 21\%$ ). While these results are statistically significant, the effect sizes of the relationships in the model were found to be small to moderate.

## Conclusions

Implications of these results suggest that health information websites using advertising-based revenue models must carefully monitor the types of advertisements shown, because some consumers do associate ads with the trustworthiness of information presented and base their opinions and intentions upon the complete contents of websites. Several participants (about 1 in 10) commented on how they perceived the advertisements negatively, that it made the site look unprofessional or the information suspect. However, the majority of the comments and the results of the data showed that the negative effect of advertising intrusiveness in health information websites is small on the general population.

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