How Many Plastic Surgeons' Websites Contain Information Recommended by the ASPS Advertising Code of Ethics?

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Citation

Abstract

Websites are rapidly replacing print media as the main medium for American plastic surgeons to advertise their practices to patients, as consumers, in the highly competitive market of plastic surgery. Plastic surgeons may believe exaggerating their advertising messages on their websites will help them compete. These practices also raise concern that their advertising messages may displace information patients, as consumers, need for clinically sound choices. Using the American Society of Plastic Surgeons (ASPS) Advertising Code of Ethics ("Code") adopted in 2002, we reviewed websites maintained by plastic surgeons to learn whether these websites contained specific items recommended or suggested by the Code. Our preliminary work does not assess whether choosing not to post a given item makes a plastic surgeon more or less ethical in clinical practice. We tested for relationships between items listed with the Code such as specialty board certification, health plans honored or accepted, and practice limitations related to a specific area or field. Additional items queried included the city of practice, presence of a physician photo, practice specialty, and the presence of photo demonstrating a cosmetic effect. Our results show the majority of these websites contain very few of the ASPS recommended items. Moreover, we identified significant relationships between features of the websites and the items recommended for inclusion by the ASPS. We believe more studies are required to learn whether our findings have implications for ethical behavior and patient care.

INTRODUCTION

"Plastic surgeons are always making mountains out of molehills." -Dolly Parton

The number of plastic surgery procedures has increased dramatically in recent years (Hennink-Kaminski, 2006; Sarwer, 2001). Many people consider aging or an unsatisfactory cosmetic appearance to be a curable "disease" (Askegaard, Gertsen, & Langer, 2002; Haiken, 1997). According to the American Society of Plastic Surgeons (ASPS)—the main U.S. professional association of plastic surgeons—there were more than 11.8 million cosmetic surgery procedures performed in the United States in 2007, up 7% from 2006 when approximately $12.4 billion was spent on cosmetic surgery (2008). The U.S. cosmetic surgery procedures industry is projected to reach $15.1 billion by 2012 (Global Industry Analysts, 2009). The investment of time and money in plastic surgery products and procedures is driven by Americans' obsession with physical appearance.

The data contain only plastic surgeries officially registered with the ASPS, so the number of actual procedures may exceed reports (Hennink-Kaminski, 2006). Along with the

increase in the number of procedures, the competition to recruit more patients has become more intense (Hennink-Kaminski, 2006). Since most plastic surgeries are not covered by health insurance, the surgeons' income is mainly determined by how many patients they can recruit (Spilson et al., 2002). Therefore, plastic surgeons have made significant efforts to promote their medical practice to the public using diverse marketing endeavors, including advertising (Ring, 1999; Sullivan, 2001; Sarwer, 2001). However, despite the widespread use of advertising and other promotional tools, there have not been enough studies regarding the actual content of the plastic surgery advertisements on websites.

Motivated by the lack of research about the content of the plastic surgeons' marketing methods, this study seeks to examine one important issue of plastic surgery's public communication, namely the content of plastic surgeons' websites. The present research analyzes whether the current plastic surgeons' websites in the United States reflect the ASPS Advertising Code of Ethics ("Code") by examining specific items that could help websites comply with the Code. The authors only examines whether the plastic

surgeons' websites are transparent in terms of information elements (e.g., a statement that the physician provides services under specified health care plans, a statement about specialty board certification, or a statement that the physician's practice is limited to specific fields) based on the recommendations of the ASPS for inclusion in the surgeons' promotional tools, such as websites.

The present study does not examine whether plastic surgeons conduct their medical practice in an ethical way.

The Code is "a set of examples of the types of useful information that could be included in ethical advertising. The list is illustrative and should not be interpreted as excluding other relevant information consistent with the ethical guidelines established herein" (p. 341, www.asps.org, Accessed on April 25, 2010).

Therefore, the results of this study do not reflect the ethical perspectives of a given plastic surgeon and their medical ethics or performance. Plastic surgeons need not comply with the Code, because it is voluntary, not mandatory. At the same time, the authors believe that the findings of this study could play an important role in understanding the tendencies and selection choices plastic surgeons make when it comes to advertising. First, our research serves as a basis for future research on the role of marketing tools in plastic surgery as an important area of study in health communication. Also, the findings from our study will provide valuable insight into industry practices that regulatory bodies may use to evaluate professional responsibility in terms of marketing ethics and supplying relevant information needed for informed decision making.

LITERATURE REVIEW

This study analyzes the content of plastic surgeons' websites based on the elements in the ASPS Advertising Code of Ethics ("Code") because plastic surgeons are using their websites as advertising tools (Meyers, 2001). Many current studies have indicated that websites may be a useful new medium for advertising. Hwang, McMillan, and Lee (2003) described the Internet as playing a significant role as a corporate advertising tool. According to their research, websites have multiple functions as advertising media, providing information and building an image for companies and their brands, as well as performing direct and indirect selling functions. Daugherty and Reece (2002) noted the widespread diffusion of Internet technology in both the industry and curricula of advertising programs. They

confirmed that the Internet is superior to other mass media as a tool for advertising and public relations efforts. Furthermore, Tsao and Sibley (2004) pointed out that the Internet is a complementary medium that has not displaced other media as sources of advertising information. They believe that the Internet will become a more effective and powerful advertising vehicle in the near future. Based upon these research efforts, this study uses items from the Code to develop a coding scheme for investigating the content of plastic surgeons' current websites.

The increasing rate of complications from plastic surgeries and the patients' growing concern about the results of the procedures provide additional background context for this analysis. Information presented here is mainly from a website called www.smartplasticsurgery.com (Accessed on April 25, 2010). This website is sponsored by many plastic surgeons practicing in the United States, but it provides information about not only American plastic surgeons but also international plastic surgeons. The site is different from the ASPS site; it contains a lot of personal advertisements by individual plastic surgeons. Generally, each advertisement provides a link to a physician's website. In addition, there is a lot of information regarding different types of plastic surgeries, such as breast augmentation, breast reduction, eyelid surgery, face lifts, liposuction, and tummy tucks. Since this is a website established and managed by surgeons who are certified by the American Board of Plastic Surgery, only the names and information of the certified members are eligible for listing. In order to become a certified member, a plastic surgeon must have completed at least 3 years of general surgery and at least 2–3 years of supervised residency in plastic surgery. However, the disclaimer on the website said that "SmartPlasticSurgery.com does not guarantee that (all the information here) is accurate or complete, and is not responsible for any actions resulting from the use of this information."

Our recent economic crisis created a slight drop in the number of cosmetic procedures due to the current economic crisis—about $13.2 billion spent in 2007 (Parker-Pope, 2010). Even so, the American Society for Aesthetic Plastic Surgery noted that comparatively inexpensive procedures like injections to smooth out or fill wrinkles showed signs of a rebound (Parker-Pope, 2010). Reality is Botox injections and fillers such as Restylane increased by 4% in 2009 compared to the previous year. Despite the consistent popularity of these procedures in general, the rate of

complications and patient complaints have increased (www.smartplasticsurgery.com, Accessed on May 5, 2010). There have been numerous types of patient complaints after procedures, ranging from loose sutures, infections, and blood clots to airway obstruction and even temporary paralysis. Along with explaining what common complications patients can have regarding popular plastic surgeries, the website (www.smartplasticsurgery.com, Accessed on May 5, 2010) recommends that the best way to get better results from plastic surgery is to meet with certified physicians by using their advertisements and other information sources. As SmartPlasticSurgery.com indicates, even though many patients are eager to find reliable plastic surgeons, it is true that there are limited information sources for people to figure out who the more trustworthy plastic surgeons are. Therefore, many patients rely on promotional tools that plastic surgeons themselves provide, such as magazine advertisements and websites. In addition to advertisements and websites, word-of-mouth referrals by columnists and bloggers are another way of getting information to prospective patients (Hennink-Kaminski, 2006).

Since 1980, American health care providers have been able to advertise their practices directly to their patients as consumers (Schaffer, 1989). Even though health care providers from different specialties routinely use advertising media, plastic surgeons are one of the most active groups in using a multi-media approach (Johns & Moser, 1989; Spilson et al., 2002). Two important reasons why most plastic surgeons want to advertise their practices to the public may exist. First, most cosmetic procedures are elective compared to procedures in other medical specialties (Spilson et al., 2002). Therefore, plastic surgeons need to contact potential patients through their own efforts and persuade them that they would benefit from the procedures (Hennink-Kaminski, 2006). For this reason, plastic surgeons' advertising is perceived as an important tool for their economic survival. Second, most cosmetic procedures are not covered by health insurance which means that the plastic surgeons derive their profits from the number of patients they recruit for surgery or other procedures (Spilson et al., 2002; Haiken, 1997; Sullivan, 2001). Along with the competitive situation among plastic surgeons, the advertising expenses for plastic surgeons in the United States have skyrocketed (Hennink-Kaminski, 2006). One researcher called the phenomena in which many physicians and clinics advertise their specialties a "medical marketing revolution" (Sullivan, 2001, p. 85).

Even though the number of patients who seek plastic surgery has recently increased enormously (ASPS, 2007), the number of plastic surgeons has outstripped demand (Hennink-Kaminski, 2006). There is no reason to believe this imbalance will change soon since a large number of medical students want to enter this profession. This shift in professional choice siphons off candidates from other medical specialties such as otolaryngology, ophthalmology, and general surgery (Hennink-Kaminski, 2006; Market Research, 2005; Sullivan, 2001; Haiken, 1997). This overabundance of plastic surgeons intensifies the competition for prospective customers who also become their patients (Spilson et al., 2002). Consequently, this glut of plastic surgeons into a highly competitive market requires greater marketing efforts, including advertising through websites (Padgett & Haas, 2004).

There is another important organization that consists of American plastic surgeons called the American Board of Medical Specialties (ABMS). Established in 1933, ABMS is a not-for-profit organization comprising of certified American doctors across about 145 specialties. The website (www.abms.org, last accessed on May 6, 2010) says that the ABMS members are all certified specialists who are leaders in their field because they voluntarily participate in lifelong learning to keep their skills and knowledge current. They demonstrate their commitment to quality clinical outcomes, patient safety, and a responsive, patient-centered practice through participation in a continuous maintenance of certification (MOC) program. The most important function of the ABMS is to assist its members in developing and implementing educational and professional standards to evaluate and certify physician specialists. Therefore, both the ASPS and ABMS have a common goal of certifying physicians and maintaining certification by providing assurance to the public that the physician specialists have successfully completed an approved educational program and evaluation process. This includes components designed to assess the medical knowledge, judgment, professionalism, and clinical and communication skills required to provide quality patient care in that specialty (www.abms.org, Accessed on May 6, 2010). Visitors to the ABMS website can watch a public service announcement explaining why the patients should be treated only by certified doctors and how to find them through the website; this is similar to the function performed by the ASPS website. The two organizations have made efforts to provide potential patients with information to enable them to make better medical

choices and to encourage their members to conduct their medical practices in an ethical manner for the last about 70 years. The reason for the present study to analyze the websites of the members of the ASPS instead of the ABMS is that the authors wanted to focus on the issues about the plastic surgery rather than diverse medical practices.

EFFORTS TO MAKE PLASTIC SURGEONS' WEBSITE ADVERTISING MORE ETHICAL

Under the competitive situation among plastic surgeons, some researchers have examined several ethical issues regarding the content of advertising by plastic surgeons (Morreim, 1998; Miller, Brody, & Chung, 2000). They have pointed out that there is the possibility of consumers misunderstanding or even being deceived by exaggerated or falsified advertising messages, as well as a lack of important information that consumers need to know to make an educated choice about plastic surgery (Davis, 2002; Francis et al., 2006). These concerns have pushed some related organizations to curb ethically dubious marketing practices related to advertising. First, the American Board of Plastic Surgeons created its own Code of Ethics covering advertising in 2001. Their guidelines urge plastic surgeons not to engage in advertising that gives patients unrealistic expectations as a result of deceptive or false messages. In the same year, the ASPS established their Code which contains a diverse list of items that might improve the ethical content advertisements used by their membership. It serves as a way to give potential patients enough correct information that allows them to make more informed choices. The suggested items range from "a statement of regular e-mail or website addresses and telephone numbers of the member's offices" to "a statement that the member regularly accepts installment payments of fees, credit cards and/or other available financing options" (see Table 1).

At least one study has analyzed the content of the plastic surgeons' advertisements to determine whether they contain such elements. Spilson et al. (2002) investigated the plastic surgeons' advertisements in 10 major U.S. cities' yellow pages by comparing them to the individual items from the Code promulgated by the ASPS. The researchers hired 50 panelists to review a total of 104 yellow pages advertisements placed by ASPS-registered plastic surgeons. The results revealed that about 25% of the plastic surgeons' advertisements used images or pictures that falsely or deceptively created unjustified expectations of favorable results (Spilson et al., 2002). Also, the panelists determined

that 22% of the advertisements in the sample "appealed primarily to the layperson's fears, anxieties, or emotional vulnerabilities" (Spilson et al., 2002, p. 1181). Unlike our study of website content, a 2006 study by Francis et al. analyzed the Internet yellow pages advertisements of dermatologists in California, New York, Texas, and Colorado (Francis et al., 2006). Although this study did not compare items from the ASPS advertising code of ethics, the results raised some potential ethical issues for the advertising content studied. The authors identified a total of 50 advertisements (17% of the sample) with unverifiable or non-board-certified information about the physicians who advertised. These studies also raise several possible areas of inquiry into the advertising practices of members of the ASPS and whether they follow the recommendations of their Code.

RESEARCH QUESTIONS

We examined the following research questions:

RQ1.

WHAT ITEM(S), IF ANY, FROM THE ASPS ADVERTISING CODE OF ETHICS IS (ARE) FOUND ON THE PLASTIC SURGEONS' CURRENT WEBSITES? ALSO, WHICH ITEM(S) IS (ARE) NOT FOUND ON THEIR WEBSITES?

RQ2.

IF THE FREQUENCY OF THE PRESENCE (OR ABSENCE) OF EACH ITEM FROM THE ASPS' ADVERTISING CODE OF ETHICS IS HIGHER THAN THE ABSENCE (OR PRESENCE), IS THE DIFFERENCE STATISTICALLY SIGNIFICANT?

RQ3.

ARE THERE ANY RELATIONSHIPS BETWEEN THE CHARACTERISTICS OF THE WEBSITES (E.G., WEBSITE LOCATION, PICTURES OF THE PHYSICIAN, THE PHYSICIAN'S BOARD CERTIFICATION, THE PHYSICIAN'S SPECIALTY, PRESENCE OF A VERIFIED ENDORSER, BEFORE AND AFTER SURGERY PICTURES) AND THE PRESENCE (OR ABSENCE) OF EACH ITEM FROM THE ASPS ADVERTISING CODE OF ETHICS?

METHOD

According to recent studies and media reports, there are three major types of advertising methods American plastic surgeons use for their public communication: magazine advertisements (Hennink-Kaminski, 2006), yellow pages

advertisements (Spilson et al., 2002), and websites (Francis et al., 2006). Among these, this study focuses on the fastest-growing advertising medium the plastic surgeons' websites (ASPS, 2007). In selecting plastic surgeons' websites for the sample, two conditions were applied. First, 10 major U.S. cities were chosen based upon the size of the plastic surgery market (New York, Washington, D.C., Dallas, Philadelphia, Atlanta, Chicago, Los Angeles, Phoenix, Boston, and Detroit). Once the particular cities were selected, the researchers checked with the ASPS database to get a list of the registered plastic surgeons' websites in those cities (http://www.plasticsurgery.org/, Accessed on May 17, 2010).

The database provided information on registered and eligible member physicians, including their names and website addresses, in the 10 cities. Using a random sampling method, a total of 100 websites were chosen—10 plastic surgeons per city. As shown in Table 1, the items in the ASPS advertising code of ethics were employed as the coding scheme. The presence of the 12 items from the code of ethics on their websites was determined (Yes/No).

Figure 1

Table 1
The 12 Items in the Advertising Code of Ethics Recommended by the ASPS

1. A statement of regular E-mail address.
2. A statement of Web site addresses.
3. A statement of telephone numbers.
4. A statement of language, other than English, fluently spoken by the physician or a person in the physician's office.
5. A statement as to specialty board certification or a statement that the physician's practice is limited to specific fields.
6. A statement that the physician provides services under specified private or public insurance plans or health care plans.
7. A statement of names of schools and postgraduate clinical training programs from which the physician has graduated, together with the degrees received.
8. A listing of the physician's publications in educational journals.
9. A statement of teaching positions currently or formerly held by the physician, together with pertinent dates.
10. A statement of the member's affiliations with hospitals and clinics.
11. A statement that the physician regularly accepts installment payments of fees, credit cards and/or other available financing options.
12. The advertisement clearly and noticeably states that the model in the advertisement has either received the advertised services or not.

Note: Since including these items is voluntary, the results from the present study do not indicate the physicians' ethical perspectives toward their advertising/websites or their medical practice. Please see the instruction from the ASPS regarding this guideline: "A member may advertise through public communications media such as professional announcements, telephone and medical directories, computer bulletin boards, Internet web pages and broadcast and electronic media. The following are examples of the types of useful information that could be included in ethical advertising" (ASPS, p. 341, Lastly accessed on April 25, 2010).

The first page of each plastic surgeon's website was utilized as a sampling unit for this exploratory content analysis since the first page serves as a type of front gate to the entire website (Bucy, Lang, Potter, & Grabe, 1999; Ha & James, 1998). A website's front page plays a key role in drawing consumers' attention and motivating them to stay. Therefore, the owners of the websites typically attempt to place the most important information they want to communicate to consumers on the first page using their best efforts to advertise their products or services (Chan-Olmsted & Park,

2000; Yu & King, 2005; Baek & Yu, 2009). If a website does not capture people's attention on the front page, there is a decreased likelihood of consumers remaining there (Chan-Olmsted & Park, 2000). However, in the present study, if a website used the first page solely for catching the eye of potential patients (e.g., using a flash technique or just a greeting), the next page was chosen for analysis.

Two coders were hired to investigate 100 websites of American plastic surgeons to see if they included items from the ASPS Advertising Code of Ethics ("Code") adopted in 2002. Regarding the qualification of the coders, each of them had participated in several projects of website content analyses as coders over a 3-year period. In the coding scheme, 12 questions investigating the presence of the code of ethics items were measured using a binary scale (1 = yes and 0 = no). After the authors trained the two coders, a pilot test was conducted to check inter-coder reliability and the quality of the coding scheme. The size of the sample for the pilot test was set at 40% of the total sample. Similar percentages had been utilized for pilot tests in several previous studies (Neuendorf, 2002).

A total of 40 websites (four from each city) were printed as hard copies for the analysis. Although some research has suggested coding the content of websites by viewing it on a computer monitor (e.g., Macias & Lewis, 2003), the researchers decided to use hard copies because there would not be a significant difference between the two methods and because the coders preferred using hard copies. In addition, this allowed the coders to code website information on the same day and gave them the ability to go back to the hard copy of the website to check coding discrepancies. The two coders coded 40 websites each, independently, using the items in the Code.

To calculate inter-coder reliability, the Program for Reliability Assessment with Multiple Coders (PRAM) was utilized. Results revealed an average 74% agreement (global) inter-coder reliability. Some variables attained poor agreement between the two coders. The authors decided to pursue higher inter-coder reliability as recommended by previous research (Neuendorf, 2002). An extra training session lasting approximately 2 hours was conducted. After the further training, the coders coded the sample independently again and achieved an acceptable inter-coder reliability of 84% global agreement (Kassarjian, 1977). Also, no item got less than 75% reliability. After achieving an acceptable level of inter-coder reliability, the two coders

were asked to code 100 websites each, independently. They were given 2 weeks for the coding process (February 10–24, 2008). The coding was completed by the two coders and given to the authors on February 25, 2008. The Chi-Square Goodness-of-Fit Tests and cross-tab tests were used as the statistical methods for analyzing the data, in addition to simple descriptive statistics. A more detailed description about each statistical method will be presented in the results section.

RESULTS

To answer the three research questions indicated above, this study employed a several statistical methods to analyze the data. First, simple descriptive statistics were used to figure out the frequency of appearance of the 12 items from the Code on plastic surgeons' websites. Second, to determine whether the differences between the usage and non-usage of each item were statistically meaningful, the Chi-Square Goodness-of-Fit Tests were also conducted (Meyers, Gamst, & Guarino, 2006). Lastly, cross-tabs tests were conducted to determine whether some characteristics of the websites (e.g., city where the physician is practicing, picture of the physician, information about the physician's board of certification, information about the physician's specialty, presence of a verified endorser, presence of before and after pictures of patients) are significantly related to the presence of each item from the ASPS advertising code of the ethics. Among the 12 items, the item asking about the presence of the website address was eliminated from the analysis since this research examined websites themselves.

RQ1.

WHAT ITEM(S), IF ANY, FROM THE ASPS ADVERTISING CODE OF ETHICS IS (ARE) FOUND ON THE PLASTIC SURGEONS' CURRENT WEBSITES? ALSO, WHICH ITEM(S) IS (ARE) NOT FOUND ON THEIR WEBSITES?

Among the specific items in the Code, the most frequently found item on the plastic surgeons' websites was the "e-mail addresses or telephone numbers of the physician," which was found on 85 of the 100 websites. Another popular item was the "physician's affiliations with hospitals and clinics." At the same time, there was a big difference in the frequency of appearance of this item compared to the first item. Only 14 websites contained information about the second item on the first page of the plastics surgeons' websites. Next, 14 websites contained information about "accepting installment payments of fees, credit cards and/or other available

financing options." Those were the top four items that appeared on the plastic surgeons' websites.

Some items rarely appeared on the plastic surgeons' websites. For example, the items "providing services under specified private or public insurance plans or health care plans" and "office hours regularly maintained by the physician" were each found on just three websites (see Table 2). Also, the information about the "availability of the second language use" was found on only three websites. In addition to the items indicated above, items about the physician (e.g., the schools the physician attended, academic/industry publications, and teaching positions) were rarely seen on the websites.

Figure 2

Table 2		
Appearance of Each Item from the ASPS Advertising Code of Ethics Included in Physicians' Website Advertising		
Items	Frequency	Percentage
A statement of regular E-mail address.	84	84%
A statement of telephone numbers.	84	84%
A statement of language, other than English, fluently spoken by the physician or a person in the physician's office.	3	3%
A statement as to specialty board certification or a statement that the physician's practice is limited to specific fields.	1	1%
A statement that the physician provides services under specified private or public insurance plans or health care plans.	3	3%
A statement of names of schools and postgraduate clinical training programs from which the physician has graduated, together with the degrees received.	6	6%
A listing of the physician's publications in educational journals.	10	10%
A statement of teaching positions currently or formerly held by the physician, together with pertinent dates.	7	7%
A statement of the member's affiliations with hospitals and clinics.	14	14%
A statement that the physician regularly accepts installment payments of fees, credit cards and/or other available financing options.	14	14%
The advertisement clearly and noticeably states that the model in the advertisement has either received the advertised services or not.	5	5%

Sample size: 100

RQ2.

IF THE FREQUENCY OF THE PRESENCE (OR ABSENCE) OF EACH ITEM FROM THE ASPS' ADVERTISING CODE OF ETHICS IS HIGHER THAN THE ABSENCE (OR PRESENCE), IS THE DIFFERENCE STATISTICALLY SIGNIFICANT?

To determine whether the differences between the appearance or non-appearance of each item on the plastic surgeons' websites are statistically significant, the Chi-Square Goodness-of-Fit Tests (Meyers, Gamst, & Guarino, 2006) were conducted for each item's presence on the websites. Our results revealed significant differences between the usage and non-usage of the 11 items investigated. Absence of an item was statistically significant since most of the items from ASPS Code rarely appeared on the websites we analyzed..

Figure 3

Table 3 Results of the Chi-Square Goodness-of-Fit Tests		
Items	**Frequency**	**Sig.**
A statement of regular E-mail address.	84	$P<.01$
A statement of telephone numbers.	84	$P<.01$
A statement of language, other than English, fluently spoken by the physician or a person in the physician's office.	3	$P<.01$
A statement as to specialty board certification or a statement that the physician's practice is limited to specific fields.	1	$P<.01$
A statement that the physician provides services under specified private or public insurance plans or health care plans.	3	$P<.01$
A statement of names of schools and postgraduate clinical training programs from which the physician has graduated, together with the degrees received.	6	$P<.01$
A listing of the physician's publications in educational journals.	10	$P<.01$
A statement of teaching positions currently or formerly held by the physician, together with pertinent dates.	7	$P<.01$
A statement of the member's affiliations with hospitals and clinics.	14	$P<.01$
A statement that the physician regularly accepts installment payments of fees, credit cards and/or other available financing options.	14	$P<.01$
The advertisement clearly and noticeably states that the model in the advertisement has either received the advertised services or not.	5	$P<.01$

RQ3.

ARE THERE ANY RELATIONSHIPS BETWEEN THE CHARACTERISTICS OF THE WEBSITES (E.G., DIFFERENT LOCATIONS, PICTURES OF THE PHYSICIAN, THE PHYSICIAN'S BOARD CERTIFICATION, THE PHYSICIAN'S SPECIALTY, PRESENCE OF A VERIFIED ENDORSER, PRESENCE OF BEFORE AND AFTER SURGERY PICTURE) AND THE PRESENCE (OR ABSENCE) OF EACH ITEM FROM THE ASPS ADVERTISING CODE OF ETHICS?

Since the appearance of each item from the Code was determined by YES/NO questions, a series of Chi-square tests was employed to answer RQ 3. First, using the 10 major cities as independent variables (New York, Washington, D.C., Dallas, Philadelphia, Atlanta, Chicago, Los Angeles, Phoenix, Boston, and Detroit), the appearance of each item was investigated. However, there was not one item indicating a significant difference because of the different cities where the plastic surgeons practice. In addition to the different cities, the researchers also investigated whether there were some differences in the appearance of items from the ASPS advertising code of ethics that depended on the characteristics of the websites. The characteristics that were used were: (1) photo of the physician(s), (2) physician's board certification, (3) physician's specialty, (4) presence of a verified endorser(s), and (5) the presence of before and after surgery pictures. Employing these features as the five grouping variables, additional Chi-square tests were conducted to determine whether there was any difference in the use of each item from the ASPS advertising code of ethics.

Regarding the results concerning the photo of the physician, the websites without the physician's photo also had less

information about the physician's academic accomplishments (e.g., physician's publications). Except for the presence of the picture of the physician, there was no significant difference in the appearance of the items by the grouping variable.

The researchers found that the websites with information dealing with the physician's specialty (e.g., eyelid surgery, butt lift, breast augmentation, chin surgery, and tummy tuck) had more information about the physician's academic accomplishments, including publications and previous/current career at medical schools (see Table 4). Also, the websites with information about the physician's specialty provided more information about payment options for consumers. Other items from the Code showed no significant difference by the categorical variable, which is the presence of information about the physician's specialty.

The next grouping variable was the presence of a verified endorser, which was defined as a person or people, such as a celebrity, promoting the physician's clinic/medical service on the website, along with the individual's identification (e.g., name, affiliation, title, and specialty). Therefore, patients of the clinic, nurses, and the physicians were excluded from this category. The results showed that the websites without a verified endorser rarely provided information about health insurance for consumers. The other 10 items were not significantly changed by the presence of a verified endorser. The results also did not show any significant difference regarding the presence of before and after picture of patients on the surgeons' websites.

Figure 4

Table 4 Appearance of Each Item from the ASPS Advertising Code of Ethics by Certain Characteristics of the Websites						
Items	**City**	**Photo of the Physician**	**Physician's Board of Certification**	**Physician's Specialty**	**Presence of a Verified Endorser**	**Presence of a Before and After Picture of Patient**
A statement of regular E-mail address.	-	-	-	-	-	-
A statement of telephone numbers.	-	-	-	-	-	-
A statement of language, other than English, fluently spoken by the physician or a person in the physician's office.	-	-	-	-	-	-
A statement as to specialty board certification or a statement that the physician's practice is limited to specific fields.	-	-	-	-	-	-
A statement that the physician provides services under specified private or public insurance plans or health care plans.	-	-	-	-	$P<.05$	-
A statement of names of schools and postgraduate clinical training programs from which the physician has graduated, together with the degrees received.	-	-	-	-	-	-
A listing of the physician's publications in educational journals.	-	$P<.05$	-	$P<.01$	-	-
A statement of teaching positions currently or formerly held by the physician, together with pertinent dates.	-	-	-	$P<.05$	-	-
A statement of the member's affiliations with hospitals and clinics.	-	-	-	-	-	-
A statement that the physician regularly accepts installment payments of fees, credit cards and/or other available financing options.	-	-	-	$P<.05$	-	-
The advertisement clearly and noticeably states that the model in the advertisement has either received the advertised services or not.	-	-	-	-	-	-

DISCUSSION AND CONCLUSION

Our results show a significant lack of items from the ASPS Advertising Code of Ethics ("Code") on plastic surgeons' websites. Even though there were some differences in the levels of usage of code of ethics items, generally most of the 11 items rarely appeared on the plastic surgeons' websites (p<.05). Therefore, the results from the present study indicate that there is a gap between the ASPS organization's recommendations for providing information that could help potential patients make a better choice regarding plastic surgery and the actual marketing content on the websites of the ASPS members. However, the gap does not necessarily mean that the plastic surgeons' have unethical practices, since including the items from the Code is voluntary (http://www.plasticsurgery.org/, Accessed on May 5, 2010).

Our study results are partly consistent with those from related studies, such as Spilson et al.'s (2002) content analysis of plastic surgeons' yellow pages advertisements. They reported that many plastic surgeons' messages in their yellow pages ads did not contain the ethically recommended information.. Even though we do not address the ethics of the plastic surgeons whose websites are analyzed (since adopting the code of ethics items is voluntary), the results from the present analysis provide an overview of the general tendency in electronic media that mirrors print media tactics of focusing on information that attracts patients as consumers. It remains unclear whether the absence of these items impacts patient care or ethical behavior..

Compared to other health communication fields, the communication tools used by plastic surgeons have not received sufficient attention from researchers, particularly in terms of content recommended by the ASPS for ethical practices (Miller, Brody & Chung, 2000). Advertising in certain fields of health communications, such as anti-smoking advertising (e.g., Paek, Yu, & Bae, 2009), diet advertising (e.g., Gross, 2006), and food advertising for children (e.g., Buijzen & Valkenburg, 2003), have been examined by researchers more often than advertising by plastic surgeons (Spilson et al., 2002). In addition, studies about consumer protection from irresponsible marketing messages have been conducted often in certain health fields (Byrd-Bredbenner, 2002; Cappella, Fishbein, Barrett & Zhao, 2005). The results from the present study show a need for a more comprehensive examination of plastic surgeons' advertising in print as well as electronic media. The need is particularly urgent since the total number of plastic surgery procedures in the United States reached nearly 11.5 million in 2008 (www.cosmeticplasticsurgerystatistics.com, Accessed on May 5, 2010). This number indicates that there are many consumers who need information from plastic surgeons' websites to make the appropriate medical choices. As in other health communication fields, the field of plastic surgery requires measures to protect consumers from misleading advertising, such as stricter guidelines and regulations regarding advertising content and the responsibilities of plastic surgeons in their advertising messages.

Among the five characteristics of the plastic surgeons' websites used as grouping variables in this study (i.e., picture of the physician, physician's board certification, physician's specialty, presence of a verified endorser, presence of patient before and after picture), we found that some of the characteristics are significantly related to the presence of the ASPS advertising code of ethics items. The results show that the websites that include more detailed information about the physician(s) also contained more items from the code of ethics. As an example, showing the photo(s) of the physician(s) with identifying information such as the specialties and experiences on websites could indicate a higher possibility for the websites to contain more items recommended by the ASPS. Also, information about the specialty of the physician(s) could make it more likely that items from the code of ethics would be found on the physicians' websites.

This finding could provide a valuable clue for consumers choosing plastic surgeons. Seeing how much detailed information about the physician is on the website could be a good way for consumers to find out more information about plastic surgeries so they can make informed choices. Currently, there is not much consumer information when it comes to choosing better plastic surgeons, except for the physicians' advertising messages (Miller, Brody, & Chung, 2000). Therefore, we recommend that consumers do research to find more detailed information about physicians beyond what is presented on their websites.

In addition, the results from this study indicate that if consumers see a verified endorser on the plastic surgeons' websites who is not the physician or a patient of the clinic, there is a higher possibility that the website contains more information recommended by the ASPS. However, the presence of a patient before and after picture when there is no clear information about the person, i.e., whether the

person is an actual patient or just a paid model, was not significantly related to the website's adherence to the ASPS advertising code of ethics. Judging by the characteristics explained above, an important signal for consumers is whether verified and legitimate information is available about the people in the before and after photos on the plastic surgeons' websites.

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

There are several limitations of this study and directions for future research. First, even though the sample was randomly chosen from 10 major cities in the United States, 100 websites may be too small a sample to generalize the findings from this study. The ASPS claims to have more than 6,000 plastic surgeon members. This study only analyzed about 1.6% of the plastic surgeons registered with the ASPS. Therefore, one of the challenges for future studies will be to increase the sample size. Also, increasing the sample to include plastic surgeons not registered with the ASPS would also enhance future studies. Since a lot of patients in the United States receive plastic surgery services from non-ASPS members, an important future project would be to widen the scope of the comprehensive content analysis to include more items that reflect the ethical content of advertising beyond the ASPS advertising code of ethics.

Another limitation concerns this study's strategy of using front pages of plastic surgeons' websites as the sampling unit. Although this study provided a justification in the method section for analyzing only the front page of the plastic surgeons' websites, it could be possible for some websites to contain items from the Code on other pages besides the front page. In fact, this limitation can be applied to many other website content analyses that investigate only partial content of websites. As the amount of information on a single website has grown, it has become difficult for researchers to cover all of the content of websites in one study. Some other effective method for analyzing websites could be developed. Third, since this study found that there is a significant lack of items from the Code on American plastic surgeons' websites, another study could investigate consumers' perceptions about the ethical content of physicians' advertising. For example, a study should be undertaken to examine consumers' decision-making processes about plastic surgery and where they obtained information about plastic surgeons.

Lastly, since this study used a voluntary code of ethics, the results do not indicate the level of the plastic surgeons' advertising ethics. Rather, the results merely provide an overall view regarding advertising trends on the American plastic surgeons' websites. Therefore, a future investigation of the physicians' attitudes toward advertising ethics would provide important implications not only for consumers but also for researchers.

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