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Consumers' attitudes toward advertising by medical professionals

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Abstract

Purpose – The study aims to investigate consumers' attitudes toward advertising by medical professionals, and how the attitudes varied among different demographic groups.

Design/methodology/approach – A survey using quota sampling was conducted. Altogether 1,297 adults aged 20 or above in Hong Kong filled in an online questionnaire in March 2012.

Findings – Consumers' attitudes toward advertising by medical professionals were in general favorable. Respondents reported that advertising by medical professionals provides consumers with information about the services and qualifications of practitioners. However, consumers were worried about misleading information in these advertisements. Respondents perceived strongly that advertising by medical professionals would lead to increase in the price of services. Younger respondents and respondents with higher education were more skeptical toward advertising by medical professionals.

Practical implications – Medical professionals should put emphasis on providing consumers with relevant information of their services, expertise, and qualifications to assist consumers' information search. They should refrain from using price appeal.

Originality/value: This was the first study to examine consumers' attitudes toward advertising by medical professionals in a Chinese context.

Keywords Health services, Survey, China, Hong Kong, Medical advertising

Paper type Research paper

Consumers' attitudes toward advertising by medical professionals

Introduction

In past decades, the rise of global aging and economic globalization has challenged the status quo of health care systems in many countries (Aspalter et al., 2012). Global aging is the result of two fundamental demographic forces, including rising longevity and falling fertility (Peterson, 2002). The percentage of the population aged over 65 has been estimated to increase from 8 percent in 2010 to 16 percent in 2050 (Haub, 2011). This demographic trend will increase the demand for medical as well as health care services. As a result, the medical costs to be borne by individuals and public funding by governments will also increase tremendously (Peterson, 1999).

The health of the elderly has been improving since the early 1980s (Goldman et al., 2005). However, the rising prevalence of diseases such as obesity and diabetes among the young and increases in disability suggest that future cohorts entering the private health care insurance system or the social security network might be less healthy. Improvement in health for seniors will allow them to live longer and therefore accrue more health care costs (Goldman et al., 2005). This also suggests increasing demand for health care services in the long run.

A comparison study of health systems in Europe and Asia found that the health care systems in Asia are characterized by a high degree of preventive services and policies, combined with the use of traditional medicine. Governments in East Asia control health care systems to a great extent, and are very cost-conscious (Aspalter et al., 2012).

There are mixed views on whether health care services should go private. Proponents of private care say it will reduce waiting lists in the public system. Opponents say private markets will drive the prices up to enable health providers to make profits (Davidson, 2012). Despite the diverse opinions, the need for private health care services has been undoubtedly increasing over the past decades. The rising costs of medical care may threaten the trust

between medical health providers and patients. A survey of US patients found that respondents with high medical cost burdens have less trust in their physician and have more negative assessments of the thoroughness of health care they receive from their physician.

Exposing patients to higher medical costs could lead to greater skepticism and less trust of physicians' decision-making, thereby making health care delivery less effective (Cunningham, 2009).

Consumers' attitudes toward professional advertising

Privatization of health care systems leads to the need for the health providers, including hospitals and medical practitioners, to promote such services. Advertising is one of the marketing communication channels to promote services, including health services. There has long been a trend toward deregulation of advertising rules and regulations for different types of professionals including accountants, lawyers, and physicians all over the world (Miller and Waller, 1979; Hite, Fraser and Bellizzi, 1990). Attitudes toward professionals varied significantly among professionals and the general public. Studies in the 1970s showed that professionals disliked advertising and most professionals expressed worries that such advertising would tarnish the public image of the professions (Shimp and Dyer 1978). A survey reported that advertising by medical professionals was perceived more negatively by medical practitioners than by the general public (Hite and Billizzi, 1986; Caruana and Carey, 1997). It was also found that consumers desired informative advertising by professionals, especially during the period of prohibition on professionals' advertising when such services relied heavily on word-of-mouth for promotion (Hite, Fraser and Bellizzi, 1990).

A consumer survey found that professionals including accountants, lawyers, and doctors in Hong Kong enjoy a highly favorable public image. Respondents considered professional advertising useful in providing information about services and the fee structures. Respondents perceived that advertising by professionals would not jeopardize the favorable image.

However, respondents perceived that that advertising by professionals would increase the cost of professional services (Au, 1997). Another qualitative study found that interviewees generally believe that advertising by lawyers is helpful as it makes the legal profession more approachable and transparent. However, interviewees considered that advertising by lawyers using price appeal could be misleading. Interviewees worried that advertising by lawyers would encourage the use of litigation as the preferred means of solving of disputes (Chan et al., 2012). The authors are not aware of any survey conducted in Hong Kong about consumers' attitudes toward advertising by medical doctors.

Medical professionals in Hong Kong and advertising regulations

In Hong Kong, there were 12,620 medical practitioners registered as of December 2011 (Information Services Department, HKSAR Government, 2011). The number of doctors per thousand population was 1.78, which was significantly lower than that of UK (2.71 in 2009), United States (2.15 in 2008), Japan (2.15 in 2008), or Singapore (2.23 in 2009). It is expected that the demand for medical services will be high.

The Medical Council of Hong Kong is established under the Medical Registration Ordinance. The Council is responsible for registration and professional discipline of all medical practitioners in Hong Kong. The objective of the Council is to maintain a high standard of professional conduct and to uphold trust in the competence and integrity of the medical profession (The Medical Council of Hong Kong, 2009). In the past, medical professionals were not allowed to advertise in Hong Kong (Au, 1997). According to the Code of Professional Conduct for registered medical practitioners published by the Medical Council, medical practices should not be promoted as a commercial activity (The Medical Council of Hong Kong, 2009). It is believed among medical doctors that advertising medical care as a commercial activity will undermine public trust in the profession and will diminish the standard of medical care in the long run.

In view of the increasing demand for private medical treatment, the Medical Council relaxed the regulations on practice promotion for doctors in 2008. Publication of service information in four print media, namely newspapers, magazines, journals and periodicals, was permitted (The Medical Council of Hong Kong, 2009). Not many medical doctors advertised. In 2011, the advertising expenditure spent on health services was HK\$435,817,000 (admanGo, 2012). Most of the advertisers were hospitals, clinics, laboratories or healthcare groups. Individual medical doctors accounted for only one percent of the advertising expenditure of the category.

Research objectives

We propose three research objectives for the current study:

1. to investigate consumers' attitudes toward advertising by medical professionals;
2. to examine if attitudes toward advertising by medical professionals varies among different demographical groups;
3. to examine if consumers with high knowledge level about current regulatory framework and consumers with low knowledge level have different attitudes toward advertising by medical professionals.

Methods

Sampling

A quota sampling survey of Hong Kong residents aged 20 or above was conducted in March 2012. A communication research method class of 80 students in a public university in Hong Kong was asked to invite friends to fill in an online questionnaire. Each students need to recruit at least one male and one female adult in the age groups of 20-29, 30-39, 40-49, and 50 or above. Altogether 1,403 online questionnaires were submitted. Among these, 92 percent or 1,297 sets of questionnaire were complete.

Measures

The questionnaire was adapted from a previous study on attitudes toward professional advertising (Au, 1997). Statements used in Au's study were modified to refer to advertising by medical professionals specifically. Additional statements generated from a qualitative study on attitudes toward advertising by lawyers were modified and added (Chan et al., 2012). For example, the statement "I think the media professional advertising should focus on the contribution of the whole team of doctors or dentists" was added. Altogether 24 attitudinal statements were incorporated into the questionnaire. These statements were grouped into three sections including "Attitudes toward advertising by medical professionals", "Attitudes toward medical professionals" and "Perceived impacts of advertising of advertising by medical professionals". All the statements were measured in 5-point scales with "1" indicating disagree strongly and "5" indicating agree strongly. Statements from Au's (1997) study were translated from English to Chinese by one of the authors. Another author did a back translation from Chinese to English to ensure that the meanings of the two versions were the same. In the questionnaire we defined medical professionals as all types of medical doctors and dentists serving human beings. Following the attitudinal statements, respondents were asked in which media medical professionals in Hong Kong were allowed to advertise now. Respondents were asked to choose from a list of nine media including newspapers, radio, and television. We compile a new variable of "knowledge of advertising regulation". The variable was set to one if respondents were able to identify correctly that medical professionals were allowed to advertise in both newspapers and magazines. These respondents were labeled as having a high knowledge level of the current regulatory framework. Otherwise, the variable was set to zero, with these respondents labeled as having a low knowledge level of the current regulatory framework. Finally, demographic variables including age group, sex, education, housing type, occupation, and household income group were collected. The study was conducted in Chinese.

Data analysis

Means and standard deviations of the attitudinal statements were compiled and tested against the middle point of 3 by employing one-sample t-tests. To examine the attitudes of different demographic groups, two-tailed t-tests or one-way ANOVA tests were conducted. Attitudes toward advertising by medical professionals were compared between those who had high or low knowledge levels of advertising regulations governing the advertising of medical professionals using t-tests.

Findings

Attitudes toward advertising by medical professionals

Altogether 1,297 completed questionnaires were collected. The demographic profile is summarized in Table 1. There were roughly equal proportions of males and females. A majority of them were aged 20-29. More than half of them had post-secondary or university education. About two thirds of them had monthly household income between HK\$10,000 and HK\$39,999. The median monthly household income of Hong Kong people in 2010 was \$18,000 (Information Services Department, HKSAR Government, 2012). Sixty-one percent were coded as having low knowledge of the current regulatory framework on advertising by medical professionals. [Insert Table 1 about here]

The respondents' attitudes toward advertising by medical professionals are summarized in Table 2. Four out of ten statements had mean scores that differed significantly from the mid-point of 3.0. In other words, consumers did not have strong views toward the remaining six out of ten attitudinal statements regarding advertising by medical professionals. The four statements for which consumers had strong views were all about the quality of information contained in advertisements by medical professionals. Consumers showed appreciation of the useful information about services and specialties of medical professionals carried by the advertisements. However,

consumers expressed worries that some of the advertisements by medical professionals might be deceptive or exaggerated. Respondents did not express strong views about whether medical professionals should advertise, or whether the advertisements of medical professionals should put emphasis on individual doctors or a team of doctors. They also did not express a like or dislike of consumer advertisements by medical professionals.

[Insert Table 2 about here]

Respondents' attitudes toward medical professionals are summarized in Table 3. Compared with attitudes toward advertising by medical professionals, respondents expressed much stronger views in attitudes toward medical professionals. Six out of seven statements had mean scores that differed significantly from the mid-point of 3.0. Respondents reported that they had a highly favorable image of medical professionals. They expressed an intention to deal with reputable medical professionals rather than those offering low service fees. Respondents expressed the view that medical professionals who advertised were not able to provide them with buying confidence. They reported that they would be suspicious of medical professionals who advertised. They disagreed that medical professionals who advertised were more trustworthy. They did not have more confidence on medical professionals who advertised. They also did not perceive a price-quality connection for medical professionals.

[Insert Table 3 about here]

Respondents' perceived impacts of advertising by medical professionals are summarized in Table 4. Respondents expressed much stronger views toward the perceived impacts of advertising by medical professionals than they did toward advertising by medical professionals. All seven statements had mean scores that differed significantly from the mid-point of 3.0. Among all 24 attitudinal statements

tested in the study, the highest mean score of 3.81 was reported for the statement “Advertising would lead to increase in price of medical professional services as the advertising costs will be passed on to the clients”. This indicates that a majority of the respondents were worried that they would need to pay more for medical services when medical professionals advertised. Again, respondents showed appreciation of the information content of advertising by medical professionals. This can be seen from their perception that the medical profession would be more transparent with advertising. The public would gain knowledge of the qualifications of medical professionals through advertising. Advertisements by medical professionals would save the public time and effort in locating such services. Respondents reported inconsistent views in two statements. On the one hand, respondents agreed that advertising by medical professionals would benefit incompetent doctors. On the other hand, respondents perceived that advertising would help consumers to make intelligent choices between medical professionals. Respondents also believed that advertising would introduce competition and, as a result, the quality of medical services would be improved.

[Insert Table 4 about here]

Attitudes toward advertising by medical professionals among demographic groups

A series of t-tests and one-way ANOVA statistical tests were conducted to examine if respondents in different demographic groups have different attitudes toward advertising by medical professionals. Male and female respondents showed no statistical difference in 23 out of 24 attitudinal statements. Female respondents were more likely to agree that advertising by medical professionals should focus on individual doctors or dentists than male respondents ($t=2.7$, $p<0.01$). Household income had little influence on attitudes towards advertising by medical professionals. Twenty-two out of 24 attitudinal statements showed no statistical difference among all four groups. Respondents with

lower household incomes were more likely to agree that they would like the services of medical professionals who advertise than respondents with high household incomes.

Respondents with household incomes of \$10,000 to \$19,999 per month were more likely than the other three household income groups to agree that advertising would lead to higher prices.

The age variable demonstrated significant influence on attitudes toward advertising by medical professionals. Nine out of 24 attitudinal statements showed significant age group differences. Respondents aged 20-29 agreed the most that advertising by medical professionals would be more deceptive than other forms of advertising. They worried the most about misleading advertisements by medical professionals. They were more likely to agree that advertising would lead to higher prices. They disagreed the most that medical professionals who advertise are more trustworthy. They disagreed the most that medical professionals who charge higher prices will provide better service. They agreed the most that it is better to deal with reputable doctors than doctors offering the lowest price. In other words, younger respondents were more skeptical of advertising by medical professionals than older respondents. In addition, respondents aged 50 or above disagreed the most that it was proper for medical professionals to advertise. They also had the least favorable image of medical professionals.

The education variable demonstrated significant influence on attitudes toward advertising by medical professionals. Half of the 24 attitudinal statements showed significant educational group differences. Respondents with primary or lower education levels had the most favorable attitudes toward advertising by medical professionals. They agreed the most that it is proper for medical professionals to advertise and they would like to see these advertisements. They most likely perceived these advertisements useful in informing consumers about services and specialties and would like the services

of medical professionals who advertise. They agreed the most that advertising would help consumers to make intelligent choices for medical services. Respondents with post-secondary education demonstrated the strongest skepticism toward advertising by medical professionals. They worried the most about misleading information in these advertisements. They did not believe that advertising of medical professionals would improve the quality of the service. They did not believe that medical professionals who advertise are more trustworthy. They agreed the most that it is better to deal with reputable doctors than those offering the lowest price. They showed the least confidence on medical professionals who advertise. They perceived most strongly that advertising would lead to increase in prices of medical services. However, they disagreed that advertising by medical professionals would benefit the incompetent ones.

Attitudes toward advertising by medical professionals by knowledge-level group

A series of t-tests were conducted to examine if respondents with a high or low knowledge level of the regulatory framework have different attitudes toward advertising by medical professionals. Altogether 10 out of 24 attitudinal statements showed significant difference in mean scores between the two groups. Table 5 summarizes the mean scores of the two groups for statements with significant differences. In general, respondents with a high knowledge level of the regulatory framework on advertising media demonstrated more positive attitudes toward advertising by medical professionals than those with a low knowledge level of the regulatory framework. Respondents with a high knowledge level appreciated more the information value of advertising by medical professionals. They were also more likely to perceive positive impacts of advertising by medical professionals.

[Insert Table 5 about here]

Discussion

A survey was conducted to investigate consumers' attitudes toward advertising by medical professionals. Respondents held highly favorable images of medical professionals. They agreed that medical professionals provide consumers with information on services and qualifications of medical professionals. They were suspicious of medical professionals who advertised. They believed strongly that prices for medical services would be increased because of the costs of advertising. Respondents' favorable image of medical professionals and their appreciation of the information in these advertisements were similar to Au's (1997) study on attitudes towards advertising by professionals (including accountants, doctors, and lawyer). There were two differences between the findings of the current study and Au's (1997) study. First, respondents in the current study believed that the quality of medical professional services would increase through competition while respondents in Au's (1997) did not believe so. Second, respondents in the current study perceived that advertising by medical professionals would help consumers to make more intelligent choices, while respondents in Au's (1997) study held neutral views on the issue. In other words, respondents showed to some extent more favorable attitudes towards advertising by medical professionals than advertising by professionals in general.

We now compared our results with a study of Chinese consumers' attitudes toward advertising conducted in 2002 (Chan, 2006). Chan's study found that the information functions of television advertising were well received by Chinese consumers in Hong Kong. However, respondents did not endorse the buying confidence function of television advertising. They were skeptical about the trustworthiness of commercials. They disagreed that advertising would help them to get the best buy. In the current study, respondents showed similar attitudes towards advertising by medical professionals. The information functions of advertising by medical professionals were well received by the

respondents. Respondents perceived that the medical profession would be more transparent with advertising. The information provided in the advertisements would reduce the information search costs among consumers. However, the buying confidence function of advertising by medical professionals was not well received by the respondents. A majority expressed the worry that the information contained in advertisements by medical professionals was unreliable. Respondents perceived that some incompetent medical professionals would benefit from the advertisements.

A deep rooted and strong belief about the economic costs of advertising was reflected in the current study as well as Chan's (2006) study. Similarly to our current finding, the statement in Chan's (2006) study with the highest mean among the perceived consequences of advertising was "Television advertising increases the cost of products" (mean=3.7). This indicates the economic cost of advertising was one of the strongest belief factors among consumers.

Regarding attitudes of demographic groups toward professional advertising, the current findings were different from those reported by Au's (1997) study of attitudes towards advertising by professionals in general. Older interviewees and interviewees of a lower educational level were found to be more skeptical towards advertising by professionals in Au's (1997) study. Older respondents and respondents of a lower educational level were found less skeptical toward advertising by medical professionals in the current study. This may be because older respondents and respondents of lower educational levels may have a higher need for medical services. Reliance on the service may make them less skeptical. Further qualitative study is needed to verify our speculation.

Respondents with a higher level of knowledge of the regulatory framework on advertising media were less skeptical toward advertising by medical professionals. This

may suggest that skepticism about advertising may arise from lack of knowledge of advertising practices.

To conclude, the current study measured consumers' attitudes toward advertising by medical professionals in a Chinese context. The information is useful for medical practitioners in designing their advertising message and for media professional bodies and policy makers to make informed decisions on regulation of such advertising.

Marketing implications

The similarities of the current study with two previous studies indicate that consumers' attitudes toward advertising seem to be robust over time as well as across different product categories. It is a common belief that attitudes toward advertising in general will affect audience attitudes toward a particular advertisement, which will in turn affect advertising effectiveness and brand image (Chan, 2006). The marketing implication is that advertisers should design persuasive messages that are in line with consumers' attitudes and beliefs. For example, medical professionals should put emphasis on providing consumers with relevant information of their services, expertise, and qualifications to assist consumers' information search. They should refrain from using price appeal as consumers' generally believe that advertising costs will be transferred to consumers. It is expected that enhancing buying confidence through advertising by medical professionals will be difficult. Medical professionals may consider a careful selection of credible media as well as the adoption of a professional and non-aggressive advertising tone in enhancing consumers' confidence in their advertising messages. Further studies can examine how advertising in different media may affect consumers' attitudes toward advertising by medical professionals. Studies can also be conducted to examine how consumers interpret advertisements by medical professional using different advertising appeals through experimental designs or qualitative interviews.

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Table 1 Demographic profile of respondents (N=1,297)

Demographic	No.	Percentage
Female	635	49.0
Male	662	51.0
Aged 20 – 29	547	42.2
Aged 30 – 39	258	19.9
Aged 40 – 49	267	20.6
Aged 50 or above	225	17.3
Primary or below	73	5.6
Secondary school or high school	504	38.9
Post-secondary or university	720	55.5
Monthly household income at HK\$9,999 or below	222	17.1
HK\$10,000 – HK\$19,999	412	31.8
HK\$20,000 – HK\$39,999	440	33.9
HK\$40,000 or above	223	17.2
Low knowledge level of regulatory framework*	786	60.6
High knowledge level of regulatory framework	511	39.4

*Knowledge level of regulatory framework was based on whether the respondent correctly chose newspaper and magazine as the media allowed for medical professional advertising

Table 2 Attitudes toward advertising by medical professionals

	Mean ^a	SD	t-value (mean=3)
It is proper for medical professionals to advertise.	3.02	0.90	0.8
I would like to see advertising by medical professionals.	2.98	0.93	-0.8
Advertising by medical professionals would be a useful means of informing potential consumers about services and specialties.	3.28	0.92	11.0***
Advertising by medical professionals would be more deceptive than other forms of advertising.	3.15	0.90	5.9***
The public would be provided with useful information through advertising by medical professionals.	3.36	0.82	15.9***
I would like the services (if needed) of medical professionals who advertise.	3.04	0.93	1.4
I worry about misleading and exaggerated information in advertising by medical professionals.	3.72	0.93	28.0***
I think advertising by medical professionals should focus on individual doctors or dentists.	3.05	0.96	1.8
I think advertising by medical professionals should focus on the contribution of the whole team of doctors or dentists of the same medical group.	3.05	0.92	1.8
I believe a greater use of advertising by medical professionals would improve the quality of their services.	2.96	1.04	-1.5

^a All variables are measured on a 5-point scale with 5 = Strongly agree; 1 = Strongly disagree
* $p < .05$; ** $p < .01$; *** $p < .001$

Table 3 Attitudes toward medical professionals

	Mean ^a	SD	t-value (mean =3)
I presently have a highly favorable image of medical professionals.	3.57	0.80	25.8***
In general, my image of medical professionals would be less favorable as a result of advertising.	2.99	0.90	-0.3
It is better to deal with reputable medical professionals than one who offers the lowest price.	3.51	0.96	19.1***
I believe medical professionals who advertise are stronger financially and should be more trustworthy.	2.87	0.93	-5.0***
I have more confidence in medical professionals who advertise.	2.85	0.92	-5.9***
Medical professionals who charge a higher price will provide better quality services.	2.91	1.01	-3.3***
I would be suspicious of medical professionals who advertise.	3.35	0.84	14.8***

^a All variables are measured on a 5-point scale with 5 = Strongly agree; 1 = Strongly disagree
 * $p < .05$; ** $p < .01$; *** $p < .001$

Table 4 Perceived impacts of advertising by medical professionals

	Mean ^a	SD	t-value (mean=3)
Advertising would lead to an increase in prices of medical professional services as the advertising costs will be passed on to the clients.	3.81	0.88	33.4***
Advertising would increase the quality of medical professional services through competition.	3.07	0.89	3.0**
Advertising would help consumers make more intelligent choices between medical professionals.	3.05	0.87	2.1*
Advertising helps the public to understand the qualifications of medical professionals.	3.29	0.87	11.8***
Advertising by medical professionals would benefit only quacks and incompetents.	3.13	0.83	5.8***
Advertising by medical professionals would reduce the time and effort spent finding a suitable medical professional.	3.26	0.84	10.9***
Advertising would increase the transparency of the medical profession.	3.34	0.92	13.5***

^a All variables are measured on a 5-point scale with 5 = Strongly agree; 1 = Strongly disagree
 * $p < .05$; ** $p < .01$; *** $p < .001$

Table 5 Attitudes among respondents with a low or high knowledge level of regulatory framework

	Knowledge Level ^a		
	Low	High	t-value
It is proper for medical professionals to advertise.	2.94	3.14	-3.8***
Advertising by medical professionals would be a useful means of informing potential consumers about services and specialties.	3.20	3.41	-4.1***
The public would be provided with useful information through advertising by medical professionals.	3.31	3.45	-3.1***
It is better to deal with reputable medical professionals than one who offers the lowest price.	3.46	3.59	-2.4***
Advertising would lead to an increase in prices of medical professional services as the advertising costs will be passed on to the clients.	3.73	3.94	-4.4***
Advertising would increase the quality of medical professional services through competition.	3.03	3.14	-2.1***
Advertising would help consumers make more intelligent choices between medical professionals.	3.01	3.12	-2.3***
Advertising makes the public more aware of the qualifications of medical professionals.	3.21	3.40	-3.8***
Advertising by medical professionals would reduce the time and effort spent finding a suitable medical professional.	3.19	3.36	-3.5***
Advertising would increase the transparency of the medical profession.	3.28	3.44	-3.1***

^a All variables are measured on a 5-point scale with 5 = Strongly agree; 1 = Strongly disagree
 * $p < .05$; ** $p < .01$; *** $p < .001$