

## **The impact of service quality and patient satisfaction on electronic word-of-mouth in cosmetic surgery patients in Thailand**

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### **Abstract**

A growing number of cosmetic surgery providers have created a fierce competition in the industry and growing concern in advertisement ethic. Word-of-mouth has been proven to be one of the most effective and more sustainable means to attract new customers. This qualitative study aims to determine the direct and indirect predictors of an electronic version of WOM (eWOM) through service quality and patient satisfaction. The samples were 385 cosmetic surgery patients in Thailand who answered an online questionnaire. A total of 14 outliers were excluded. Direct predictors of eWOM include two service quality dimensions – reliability and physician concern – and patient satisfaction. Indirect predictors of eWOM include responsiveness, reliability, tangible, and staff concern. Physician technical skills and interpersonal skill were the top two dimensions which affect the intensity of eWOM. Reliability was the only dimension which directly affects both patient satisfaction and eWOM.

A recommendation for cosmetic surgery providers is to focus on word-of-mouth as a primary method of marketing by continuously improving the quality of outcome and the quality of the relationship between patients and physicians. Further recommendation for the policymaker is to engage with stakeholders as well as health care providers to overhaul its policy on media advertisement and marketing. In order for Thailand to be a leader in medical tourism, it needs a good advertising and marketing strategy at a country level, but at the same time, without losing the quality and the trust of the patients which would help generate word-of-mouth. Further study is recommended on extrinsic factors that contribute to WOM, such as economic incentives and social benefits.

**Keywords:** word-of-mouth; patient satisfaction; cosmetic surgery

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## Introduction

The demand for cosmetic surgery has been increasing both globally and also in Thailand (Alharethy, 2017; Burke, 2010; Kasikorn Research Center, 2017; KPMG Phoomchai Audit, 2018). With the surge of internet users in Thailand (Hootsuite, 2018; NECTEC), cosmetic surgery clinics and hospitals are shifting their marketing effort toward the online platform. Digital health search has seen the same trend. Patients have changed their behaviour in seeking health information. They go online to find disease information, information on specific symptoms, health insurance, and diet. They also look for health care providers and search for physicians' information (Fox and Fallows, 2003; Tonsaker, Bartlett, & Trpkov, 2014). Cosmetic surgery patients also go online to seek procedures information, compare results from different providers and physicians, and all information that can help them make a decision (Montemurro, Porcnik, Hedén, & Otte, 2015; Wong and Gupta, 2011). With open access to information, cosmetic surgery providers are not only competing within their local market but also competing with international competitors. Increasing supplies lead to more choices for patients. High competition means that patients have more choices and are becoming price-sensitive (Atiyeh, Rubeiz, & Hayek, 2008). In response, many physicians and providers ramp up their effort in their advertisement, raising many ethical challenges. Studies have found many providers in cosmetic surgery make use of false claims, fake information, and downplay the side-effect and post-recovery (Atiyeh et al., 2008; Dorfman, Vaca, Mahmood, Fine, & Schierle, 2017; Liao, Taghinejadi, & Creighton, 2012; Nassab, Navsaria, Myers, & Frame, 2011; Wong, Camp, Camp, & Gupta, 2010). Knowing that information from providers' websites or social media sources may not be trusted, patients choose to seek peer reviews and referrals through online channels.

Referral and word-of-mouth are still the most effective way to do advertisement. One study has proven that health care marketing does perform well with an online advertisement, but advertisement alone will not sustain the growth in patients. The highest potential for growth with the highest return on investment was proven to be through word-of-mouth (Gould and Nazarian, 2017). Although patients understand that word-of-mouth, especially through an electronic platform, may not reflect the most accurate information and can be limited in information, it is the first source of information patients seek when deciding on cosmetic surgery procedures (Domanski and Cavale, 2012). Word-of-mouth has been a topic of study for many years. It has consistently been shown to be one of the most effective methods to convey buyers' decisions in almost all industries (Abubakar and Ilkan, 2016; Leslie Kane, 2017; Nowak and Washburn, 1998; Wheeler, Said, Prucz, Rodrich, & Mathes, 2011).

We, therefore, seek to understand the antecedents of electronic word-of-mouth (eWOM). In this study, we look at how service quality and patient satisfaction affect eWOM. We look at the direct effect of service quality and patient satisfaction on eWOM, as well as the indirect effect of service quality on eWOM through patient satisfaction.

## **Methodology**

The data for this study were collected through an online survey distributed through Facebook groups focusing on cosmetic surgery. The questionnaire was designed to collect data from Thai cosmetic surgery patients and therefore were in the Thai language. The questionnaire was divided into four sections. The first section asked respondents to fill in demographic information, including gender, age, marital status, education level, income, and occupation.

The second section has two components measuring the perceived service quality and patient satisfaction. The questions were adapted from SERVQUAL and VSQ-9 (American Medical Group Association) to suit the culture and importance patients placed in cosmetic surgery services. There was a total of 15 questions measuring 4 dimensions of service quality: responsiveness, tangibles, physician concern, and staff (other than physicians) concern. One question asked respondents to score their overall satisfaction for the service they had received. All 16 items used a five-point Likert scale (1 = strongly disagree; 5 = strongly agree).

The final section of the questionnaire measured patients' intensity of generating eWOM. Five-point Likert scale (1 = strongly disagree; 5 = strongly agree) was also used to measure eWOM intensity.

The questionnaires were published between May 2018 to October 2018. A total of 385 respondents participated and completed the questionnaires. Out of 385 patients who have completed the survey, 14 patients were excluded due to the outlier values. The absolute value of z-scores above 3.00 was considered an outlier. The final sample consisted of 335 females (90.3 percent), 1 male (0.3 percent), and 35 transgenders (9.4 percent). The average age of the respondents was 30 years old, with almost half the age between 21 – 30 years old (49.9%) and 31 – 40 years old (38.5%).

## **Results**

Multiple regression analysis to identify the influencing factors contributing to eWOM intensity in Thai cosmetic surgery patients showed

that the service quality and patient satisfaction have a significant effect on the patients' eWOM intensity ( $F(6, 364) = 24.468, p < 0.001$ )

Table 1). The result showed the influencing factors of eWOM intensity were reliability ( $\beta = 0.22, p < 0.05$ ), physician concern ( $\beta = 0.17, p < 0.05$ ), and patient satisfaction ( $\beta = 0.25, p < 0.001$ ). The equation with factors directly affecting eWOM intensity is  $eWOM = 0.22 \text{ Reliability} + 0.17 \text{ Physician Concern} + 0.25 \text{ Satisfaction}$ .

**Table 1. Multiple regression analysis predicting electronic word-of-mouth (eWOM) in cosmetic surgery patients in Thailand**

Factors	<i>B</i>	<i>sr</i>	$\beta$	<i>t</i>	<i>p</i>
(Constant)	1.40	0.23		6.21	0.000
Responsiveness	0.01	0.07	0.01	0.21	0.835
Reliability	0.23	0.09	0.22	2.49	0.013
Tangible	-0.04	0.10	-0.04	-0.44	0.657
Physician Concern	0.14	0.05	0.17	2.58	0.010
Staff Concern	0.02	0.08	0.02	0.24	0.813
Satisfaction	0.26	0.06	0.25	4.12	0.000
$R^2 =$	0.287, $R^2$ adjusted = 0.276			24.468*	

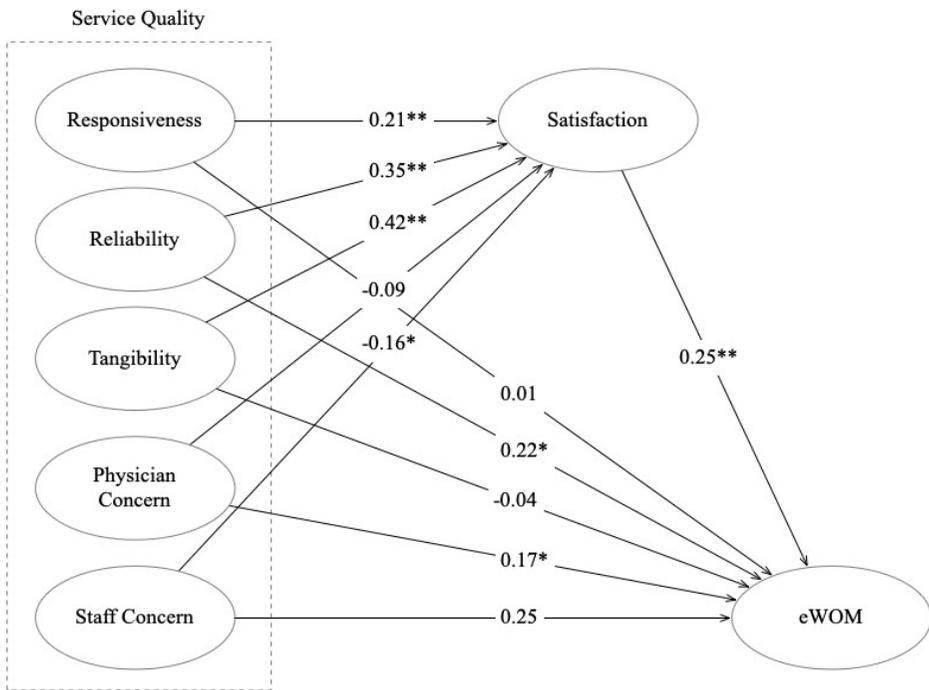
\* $p < 0.001$

To assess the indirect effect of service quality through patient satisfaction on eWOM intensity in Thai cosmetic surgery patients, multiple regression was used to assess the effect of service quality on patient satisfaction. The result showed service quality has significant effect on patient satisfaction ( $F(5, 365) = 67.239, p < 0.001$ ) (Table 2). The influencing factors of patient satisfaction were responsiveness ( $\beta = 0.21, p < 0.001$ ), reliability ( $\beta = 0.35, p < 0.001$ ), tangible ( $\beta = 0.42, p < 0.001$ ), and staff concern ( $\beta = -0.16, p < 0.05$ ). The patient satisfaction equation showing direct effect of service quality on patient satisfaction is  $Satisfaction = 0.21 \text{ Responsiveness} + 0.35 \text{ Reliability} + 0.42 \text{ Tangible} - 0.16 \text{ Staff Concern}$ . The final path diagram representing direct and indirect effect on eWOM intensity is shown in Figure 1. Factoring in the effect of service quality on patient satisfaction, the equation for eWOM intensity factoring both direct and indirect effect is  $eWOM = 0.05 \text{ Responsiveness} + 0.31 \text{ Reliability} + 0.17 \text{ Physician Concern} + 0.11 \text{ Tangible} - 0.04 \text{ Staff Concern}$ .

**Table 2. Multiple regression analysis predicting patient satisfaction in cosmetic surgery patients in Thailand**

Factors	<i>B</i>	<i>sr</i>	$\beta$	<i>t</i>	<i>p</i>
(Constant)	0.50	0.19		2.71	0.007
Responsiveness	0.21	0.05	0.21	3.97	0.000
Reliability	0.36	0.07	0.35	4.83	0.000
Tangible	0.51	0.08	0.42	6.64	0.000
Physician Concern	-0.07	0.04	-0.09	-1.51	0.131
Staff Concern	-0.16	0.06	-0.16	-2.53	0.012

$R^2 = 0.479$ ,  $R^2_{adjusted} = 0.472$ ,  $F = 67.239^*$ ,  $*p < 0.001$



\* $p < 0.05$ , \*\* $p < 0.001$

**Figure 1. Multiple regression analysis predicting patient satisfaction and electronic word-of-mouth (eWOM) in cosmetic surgery patients in Thailand**

**Discussion**

There have been many studies on the interrelationship between service quality, patient satisfaction, and patients’ willingness to recommend. The

results of previous studies have shown that patient satisfaction leads to recommendations (Haase, Lehnert-Batar, Schupp, Gerling, & Kladny, 2006; Klinkenberg et al., 2011; Zabava Ford, 2003). There have also been studies which explore the effect of service quality on patient satisfaction and patients' willingness to recommend which found that physicians' technical quality is a predictor of recommendation, while functional quality is a predictor of patient satisfaction (Cheng, Yang, & Chiang, 2003; Hall and Press, 1996). In our study, we found two dimensions of service quality (reliability and physician concern) and patient satisfaction to be direct predictors of eWOM. While indirectly, we found four dimensions of service quality (responsiveness, reliability, tangible, and staff concern) to be indirect predictors of eWOM through patient satisfaction.

In our study, we found two dimensions of service quality to have a direct effect on eWOM. Both dimensions were of physicians' concerns. The first dimension was reliability, which looks at surgery outcome and the process of how the service was delivered. The second dimension was physician concern, which looks at the physicians' interpersonal skills. Previous studies have also shown that these two dimensions were determinants of patients' willingness to recommend (Cheng et al., 2003; Fiala, 2012; Hall and Press, 1996). The studies found show variation of results. Hall and Press (1996) studied the effect of service quality on satisfaction and recommendation in ER settings. His study found that patients are more satisfied with physicians who communicate better, but the communication has to also justified or answer the questions patients have in order for them to recommend. Cheng et al. (2003), on the other hand, found that hospitals with physicians whom patients perceived to have a better technical competency were more likely to be recommended regardless of how satisfied they were. Although other dimensions of service quality were not directly influencing eWOM, they are indirectly affecting eWOM through patient satisfaction.

The result of our study has shown that patient satisfaction is also a predictor of eWOM. We found that responsiveness, reliability, tangible and staff concern were four dimensions of service quality that predict patient satisfaction, and therefore indirectly affecting eWOM. Reliability is the only variable that affects eWOM, both directly and indirectly. Physician concern was the only service quality which was not significant, contradicting to the result shown in a study done by Fiala (2012). Fiala found that, apart from recommendation, the physicians' interpersonal quality also affects patient satisfaction. His study shows that physicians' interpersonal quality is more important than technical quality since most patients use interpersonal quality also to assess a physicians' technical quality.

Tangible was found to have the highest weight of influence on patient satisfaction in our study. One study found that patients who were satisfied with the tangible aspect of service quality have higher their willingness to recommend (Haase et al., 2006). His study showed that three top factors contributing to the willingness to recommend include the general atmosphere, the success of rehabilitation, and medical care. The result from Haase et al. (2006) iterates that each cluster of care can have different precursor values of what contributes to satisfaction and word-of-mouth. A study by Klinkenberg et al. (2011) on inpatients' willingness to recommend in 11 categories of care unit also shows some differences among different categories. In his study, tangible was found to be more influencing to a willingness to recommend than other factors in the medical unit. While in most other units, nurses' interpersonal skill was the strongest predictor.

Responsiveness was found to be the third influencing factor in our study. Responsiveness includes wait-time, and responsiveness to inquiries and to support before and after surgery. In prior studies, wait-time was also found to be a predictor of satisfaction (Boudreaux, Ary, Mandry, & McCabe, 2000; Hall and Press, 1996). The study by Hall and Press (1996) also found wait-time to be a predictor of recommendation. In these two studies, the setting of the study was in the emergency department, while the setting of this study was in cosmetic surgery providers. There could be different patients' sentiment on wait-time in these two situations.

Staff concern was the variable with the lowest factor contributing to patient satisfaction in our study. Staff concern in this study includes how the staff clothes, how accessible are the staffs, and how helpful they are for both nurses and other supporting staff. Prior studies have also shown the quality of services provided by nurses and staff to be a predictor of patient satisfaction (Hall and Press, 1996; Klinkenberg et al., 2011). Some studies also showed this variable to be a predictor of a patients' willingness to recommend (Boudreaux et al., 2000; Haase et al., 2006). Although nurses and supporting staff may have the lowest factor in the equation, Hall and Press (1996) suggested that nurses may play the most important role in patient satisfaction. He suggested that nurses are the first group of people to see patients. They are the ones who interact with patients the most, and they act as intermediaries between physicians.

## **Recommendation**

Growing competition in the cosmetic surgery industry has put many providers in a difficult position on the ethic of medical advertisement. The recommendation to cosmetic surgery providers based on the result found in this

study is for them to focus on patients' referrals and word-of-mouth by improving the surgery outcome, quality of time surgeons spent with patients, and patients' overall satisfaction.

Policymakers around the world are scrambling to keep up with the regulation of medical advertisements in cosmetic surgery. With the rapid growth in internet users and social media usage, information is very dynamic and has fast dispersion. In order for Thailand to be able to compete at a global stage as a medical tourism destination and still able to maintain the patient safety through consumption of valid and ethical medical information and advertisements, policymaker should work together with health care providers to overhaul the media and advertisement policy and guideline.

Further studies should be carried out to understand factors contributing to word-of-mouth, which were not covered in this study, such as economic incentives and social benefits of WOM. Incentive programs at a country level could help position Thailand as a medical tourism destination of the region if not in Asia.

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