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# The Correlation between Relationship Quality and Behavioral Intentions Exhibited by Various Cosmetology Groups

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## Abstract

**Background:** Medical cosmetology market induced certain changes to the consumer market and consequently consumption pattern in the market traditionally dominated by salon cosmetology. This phenomenon indirectly influenced consumer behaviors and compressed the business opportunities for the traditional salon cosmetology practitioners.

**Methods:** This research was conducted over a period of two months from January to February 2013 through computer-assisted telephone interviews. Sampling was targeted on the population in Taiwan 20 years and older and people who have not yet had any cosmetology experiences are excluded. A total of 774 valid samples were derived.

**Results:** The satisfaction rate of medical cosmetology is higher than the satisfaction rate of salon cosmetology, and the satisfaction rate of service quality and facilities reached the level of statistical significance ( $p < 0.05$ ). However, satisfaction rate for "value" did not reach a level of significant difference ( $p > 0.05$ ). "attitude" and "trust" are the major positive influences to customer behavioral intentions ( $p < 0.05$ ).

**Conclusion:** This research recommends the cosmetology industry to provide differentiated services and products, with a goal to achieve a general enhancement in customer relationship quality and satisfaction rate. The result will be positive influence on customer loyalty and the willingness to pay more for the cosmetology products or services. This will be a good opportunity to create a win-win situation for the customers and the cosmetology industry.

**Keywords:** Various Cosmetology; Medical Cosmetology; Salon Cosmetology

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## Introduction

With increasing income, changing of social values, and reinforced emphasis on appearances, the cosmetology industry has become one of the fastest growing industries in the world in recent years, and the rise of the medical cosmetology market induced certain changes to the consumer market and consequently consumption pattern in the market traditionally dominated by salon cosmetology. This phenomenon indirectly influenced consumer behaviors and compressed the business opportunities for the traditional salon cosmetology practitioners. The cosmetology market can be roughly divided into two groups, salon and medical cosmetology, and the main difference lies in the practice of medical

treatment. Salon cosmetology generally does not involve medical treatment; services provided are mainly facial massage, general skin care, and makeup [1]. Medical cosmetology incorporates professional medical knowledge into cosmetology services to provide safe, reliable, and integrated beauty treatments. Non-surgical cosmetology treatments include laser light therapy, as well as radio and diode frequency treatments [2]. Medical cosmetology can be defined as "integrated consumer industry" combining professional medical technology and aesthetics [3].

In an open market system, customers are the consumers, and consumers often have different priorities to services characterized by interpersonal and non-interpersonal attributes. The different attributes are further grouped into two service quality

categories- soft (help, care, commitment, communication, and friendliness) and hard (efficiency, ability, performance, reliability, and compassion) services [4]. From the available research literature, several researchers have proposed different models for measurement of relationship quality, but most contain the measurement dimensions of attitude, trust, commitment, and satisfaction [5-8].

In most of the relationship quality models, trust and commitment are used as the fundamental relationship [9], which represents the theory that one party has the subjective willingness to believe that the other party in the transaction will fulfill an obligation and commitment and their behavior has positive influences [10-12]. Customers tend to form positive or negative opinions towards people, events, things, or behaviors and these opinions reflect their personal attitudes toward the behaviors, as well as their behavioral intentions that are like to be adopted in the future when purchasing the same products or services [5,13]. Therefore, behavioral intention can be defined as a type of performance outcome associated with the service quality [14].

Generally, in the thriving cosmetology market, intense competition drives the cosmetology practitioners to take relationship quality and behavioral intention seriously. Cosmetology is a link in the service industry; therefore, establishing good relationship quality with customers is an effectively way to enhance customer loyalty and the effect of word-of-mouth advertising and a critical factor in the success of the business. In summary, this study aims to discuss the concept of relationship quality and its influence to behavioral intention. Based on the characteristics of cosmetology, the objectives of this study are: (1) to discuss the relationship between relationship qualities (attitude, trust and commitment) and behavioral intention, targeting on the different categories of cosmetology practitioners, and (2) to compare the customer satisfaction rates in the different cosmetology practices. Results of this study will provide the cosmetology industry specific and practical recommendations and references for their practices.

## Method

### Sampling and data collection

This research was conducted over a period of two months from January to February 2013 through computer-assisted telephone interviews. Sampling was targeted on the population in Taiwan 20 years and older and people who have not yet had any cosmetology experiences are excluded. Data collection was targeted on the information relating to customer satisfaction, relationship quality, and behavioral intention. Numbers registered in the telephone directory were compiled into a computer file and sorted into 23 layers according to municipalities (counties/cities) in Taiwan. Samples (phone numbers) were randomly selected from this stratified computer file. The last two digits of the sampled telephone numbers were then replaced with random numbers to include telephone numbers not registered in the directory. This is to obtain a more representative sample for a nationwide survey. The survey was conducted between 6 pm and 10 pm during weekdays to avoid amplification of the non-working group. A total of 774 valid samples were derived.

## Research Tools

The research tool used for this research is a self-made questionnaire, which included a scale for personal background attributes and satisfaction rate and a scale for relationship quality and behavioral intention. The first step in questionnaire development was to draft the first copy based on the four procedures of scale development proposed by Guyatt et al. [15] and the process began from a search for domestic and overseas literature to establish a source database and the content of the first draft. A scoring method is then selected before moving forward to amend the content of the questionnaire based on the expert validity and face validity. At this stage, the first draft of the questionnaire is completed. After the pre-test conducted through actual interviews, slight amendment was then implemented to achieve a certain degree of validity on the measurement of variables and concept. The overall reliability analysis on the empirical data provides the Cronbach's  $\alpha$  value 0.9286. Therefore, the empirical data in this research should have a certain degree of reliability.

Secondly, the 774 subjects tested in this study were entered into a factor analysis to establish the construct validity of the scale. The KMO value (Kaiser Meyer-Olkin value) is 0.841 and Bartlett test of sphericity  $p$  value  $<0.001$ . This shows the sampling is adequate and factor analysis may be carried out. The scale was verified with principle components analysis and question selection is set with the following criteria: given value  $>1.0$  and factor loading  $>0.5$ . Four factors were extracted through orthogonal rotation of the varimax rotation method, which were named: attitude (accumulated explained variance is 69.060, Cronbach's  $\alpha$  0.850), trust (accumulated explained variance 70.377%, Cronbach's  $\alpha$  0.789), commitment (accumulated explained variance 76.349%, Cronbach's  $\alpha$  0.844), and behavioral intention (accumulated explained variance 74.373%, Cronbach's  $\alpha$  0.645), as shown in **Table 1**.

## Results

**Table 2** socio-demographic analysis shows that the distribution of salon cosmetology and medical cosmetology samples is similar to that of the national census data. The population distribution of northern, central, southern and eastern Taiwan are 44.5%, 22%, 27.8% and 5.7% respectively, and the corresponding national census distribution of each area is 44.9%, 22.6%, 27.6% and 4.9% respectively [16]. In the variable of "gender", females take up the highest percentage at 82.3%. In "age", subjects under 30 take up the highest ratio at 39.8%, followed by 31 to 40 at 36.7% and 41 and older at 23.5%. The majority of the valid samples fall in the education category of college and above at 67.6% and the largest "occupation" group is "commerce" at 58.5%. In "income", the majority falls into the category of NT\$30,000 and less at 52.2%, followed by 30,000-50,000 (41.7%), and 70.7% of the subjects spend less than NT\$5,000 on cosmetology products. Between the salon cosmetology and medical cosmetology groups, significant differences ( $p < 0.05$ ) were reached in the variables of age, monthly income, and monthly spending on cosmetology services. Customers choosing medical cosmetology tend to have higher monthly income and spend more on cosmetology services.

**Table 1** Factor analysis.

Factors	Country	Factor loading	Eigenvalue	AEV (%)	Cronbach's $\alpha$
Attitude	institutional perception	0.858	2.762	69.060	.850
	Service level	0.854			
	Service attitude	0.812			
	Service evaluation	0.798			
Trust	Privacy maintenance	0.870	2.111	70.377	.789
	Professional standard	0.855			
	Trust relationship	0.790			
Commitment	Quality assurance	0.908	2.290	76.349	.844
	Sufficient communication	0.889			
	understand needs	0.823			
Behavioral intention	Repeat purchase	0.860	1.487	74.373	.645
	Purchase by recommendation	0.862			

Note: AEV (Accumulated explained variance)

**Table 2** Descriptive statistics.

Country	Total number		Salon cosmetology		Medical cosmetology		F	p value
	n	%	n	%	n	%		
<b>Gender</b>								
Female	637	82.3	304	39.3	333	43.0		
Male	137	17.7	82	10.6	55	7.1		
<b>Age (years)</b>								
<30	308	39.8	152	19.6	156	20.2	0.26 (2)	0.877
31-40	284	36.7	145	18.7	139	18.0		
>41	182	23.5	89	11.5	93	12.0		
<b>Education</b>								
Junior high school and under	49	6.3	24	3.1	25	3.2	8.08 (2)	0.018
High school	202	26.1	118	15.2	84	10.9		
College and above	523	67.6	244	31.5	279	36.0		
<b>Occupation</b>								
Military, Civil and Teaching Staff	66	8.5	37	4.8	29	3.7	4.35 (4)	0.360
Agricultural	85	11.0	37	4.8	48	6.2		
Business	453	58.5	224	28.9	229	29.6		
Student	52	6.7	23	3.0	29	3.7		
Other	118	15.3	65	8.4	53	6.8		
<b>Live location</b>								
Northern	345	44.5	173	22.3	172	22.2	0.28 (3)	0.964
Central	171	22.0	86	11.1	85	11.0		
Southern	215	27.8	105	13.6	110	14.2		
Eastern	43	5.7	22	2.8	21	2.8		
<b>Monthly income(NT)</b>								
<30,000	404	52.2	221	28.6	183	23.6	9.42(2)	.009
30,000-50,000	323	41.7	148	19.1	175	22.6		
>50,000	47	6.1	17	2.2	30	3.9		
<b>Monthly spending on cosmetology services(NT)</b>								
<5,000	547	70.7	291	37.6	256	33.1	9.90(2)	0.007
5,000-10,000	161	20.8	63	8.1	98	12.7		
>10,000	66	8.5	32	4.1	34	4.4		

**Table 3** shows the results of the satisfaction survey targeting on the customers of salon cosmetology and medical cosmetology services. This study uses the t-test to test the satisfaction rate in three criteria. Overall, the satisfaction rate of medical cosmetology is higher than the satisfaction rate of salon cosmetology, and the

satisfaction rate of service quality and facilities reached the level of statistical significance ( $p < 0.05$ ). However, satisfaction rate for "value" did not reach a level of significant difference ( $p > 0.05$ ), which indicates that customers have a higher satisfaction rate for medical cosmetology.

**Table 3** Satisfaction survey targeting on the customers of salon cosmetology and medical cosmetology services.

Country	Salon cosmetology		Medical cosmetology		t-test	p-value
	Mean	SD	Mean	SD		
Service quality	3.37	0.750	3.51	0.808	2.449	0.015
Facilities reached	3.50	0.797	3.60	0.742	1.816	0.070
Value	3.44	0.757	3.59	0.771	2.726	0.007

**Table 4** shows the correlation between relationship quality (attitude, trust, and commitment) and behavioral intention between customers of salon cosmetology and medical cosmetology under the regression analysis model. Targeting the colinearity problem possibly occurred during regression analysis on the independent and dependent variables, this study has conducted tests of variance inflation factors (VIF value<10) and condition indicators (CI value<10) on the associated variables in advance to prevent the colinearity problem from interfering with the coefficient derived from the regression analysis model. In Model 1, the variance derived from interpretation of behavioral intention by "attitude" is 13.5%, F value is 61.506, and goodness-of-fit of the regression model reaches the level of significance ( $\rho < 0.001$ ). Results of the t-test shows that there is no significant difference in the individual independent variables of the salon cosmetology group ( $\beta$  value=0.940,  $\rho > 0.05$ ), except the variable "attitude" ( $\beta$  value=0.368,  $\rho < 0.001$ ), which reaches statistical significance. This result shows that better attitude brings higher behavioral intentions.

Model 2 sets "attitude" and "trust" as the variables and the variance of interpretation on behavioral intention is 14%, F value 43.032, and goodness-of-fit of the regression model reaches the level of significance ( $\rho < 0.001$ ). The result of t-test shows that there is no significant difference in the individual independent variables of the salon cosmetology group ( $\beta$  value=1.049,  $\rho > 0.05$ ), except "attitude" ( $\beta$  value=0.293,  $\rho < 0.001$ ) and "trust" ( $\beta$  value=0.107,  $\rho < 0.01$ ), which reached the level of statistical significance. This result shows that better attitude brings higher behavioral intentions. Model 3 sets the attitude, trust and commitment as the variables, The variance of interpretation on behavioral intentions is 14%, F value 32.524, and goodness-of-fit of the regression model reaches the level of significance ( $\rho < 0.001$ ). Results of the t-test indicate that there no significant difference in the independent variables, except "attitude" ( $\beta$  value=0.269,  $\rho < 0.001$ ) and "trust" ( $\beta$  value=0.090,  $\rho < 0.05$ ), which reached the level of statistical significance. However, the variables of "salon cosmetology" ( $\beta$  value=1.049,  $\rho > 0.05$ ) and commitment ( $\beta$  value=0.051,  $\rho > 0.05$ ) did not reach the level of significance. Overall, "attitude" and "trust" are the major positive influences to customer behavioral intentions ( $\rho < 0.05$ ).

## Discussion

In the highly competitive cosmetology market, the cosmetology industry has been working hard to understand customer needs, enhance service qualities, and establish closer relationships with customers and these factors form a significant link in the overall service structure. This research conducted a survey on customers who have had cosmetology service experiences. Specifically,

this research was targeted to explore the factors of customers' satisfaction rate, attitude, trust, and commitment towards medical and traditional salon cosmetology and associate these factors to the behavioral intentions that induce loyalty and word-of-mouth recommendation. The following is a discussion on the connotations and conclusions of this study.

### The importance of customer satisfaction

Customers are the source of profit and a significant asset to a business. Customer satisfaction is a measurement on the value of the products or services based on customers' past experiences and an overall evaluation to their experiences [17]. From the perspective of market, there are an increasing number of medical cosmetology centers, salon cosmetology shops, and skincare brands launched into the market and demand is growing. From the aspect of industrial manpower structure, the increase in the number of medical practitioners and biotechnologists, as well as the increasing opportunities for education in the field of cosmetology, shows that many people with different disciplines have shown high interest in the cosmetology industry. Therefore, we can expect that the cosmetology industry will become a star industry in the future. From the empirical results of this study, we found that customers of medical cosmetology generally have higher satisfaction rate in the quality and facilities than customers of the traditional salon cosmetology, which is consistent with the study of Chu et al. [18]. However, no statistical significance has been found in the satisfaction rate towards the "value", which contradicts the result found by Babin et al. [19] in their studies. This may have been a result that the customers tend to evaluate the value from their financial capabilities and therefore no significant differences have been found in the factors of experience, practicality, and enjoyment.

### The importance of attitude, trust, and commitment of relationship quality to behavioral intention

Attitude and trust are generally regarded as essential factors to successful relationships [20,21] and they are also important factors of relationship quality. When uncertainty and risk levels are high, developing customer trust becomes even more important [8]. When customers have positive behavioral intentions, they tend to give positive recommendations about the cosmetology centers, maintain loyalty, increase spending, and are more willing to pay higher prices for products and services. Relatively, the relationships between the customers and cosmetology centers are enhanced. From the empirical results derived in this study, we found that "attitude" and "trust" (relationship quality) positively influence behavioral intention. This result is consistent with the results found in the relevant researches [14,21-24]. In other words, higher customer trust toward the cosmetology industry will help the businesses maintain good relationships with customers, and the chances for customers to choose to products and services will also be higher.

Commitment is an important variable in the trading relationships and successful long-term partnerships [10,20,25], and also an important factor of successful long-term relationships [26]. However, no significant difference has been found between

**Table 4** Regression analysis.

Measure		Model 1		Model 2		Model 3	
		Beta		Beta		Beta	
Cosmetology							
1.	Medical cosmetology (Reference group)						
2.	Salon cosmetology	0.032	0.940	0.035	1.049	0.033	0.980
Attitude		0.368	10.968***	0.293	6.323***	0.269	5.146***
Trust				0.107	2.321**	0.090	1.819*
Commitment						0.051	1.000
Model explanation force change							
1.			0.138		0.144		0.145
2.	Adj.		0.135		0.140		0.140
3.	F		61.506		43.032		32.524
4.	P		0.000**		0.000**		0.000**

Note: \*\*\* p<0.001 , \*\*p<0.01 , \*p<0.05

commitment and behavioral intention, which contradicts the findings in the researches discussed in the previous sections. One of the possible reasons would be that cosmetology products are highly diversified, so it is rather difficult to persuade customers and induce behavioral change with commitment and guarantee on the efficacy. Therefore, significant correlation has been found. Finally, targeting the cosmetology customers, this research recommends the cosmetology industry to provide differentiated services and products, with a goal to achieve a general enhancement in customer relationship quality and satisfaction rate. The result will be positive influence on customer loyalty and the willingness to pay more for the cosmetology products or services. This will be a good opportunity to create a win-win situation for the customers and the cosmetology industry.

## Limitations

The research targets customers of the cosmetology industry. We asked each respondent to answer all questions and this may bring issues of common method variance. Therefore, we recommended the researchers interested in further study to adopt the multitrait-multimethod design, which may solve problems of errors resulting from self-describing questions and answers.

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## Conflict of Interest

The authors declare that they have no competing interests.

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