SERVICE QUALITY AS A PREDICTOR OF CUSTOMER SATISFACTION AND CUSTOMER LOYALTY

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ABSTRACT. **Background:** Service quality, customer satisfaction and customer loyalty have received a special attention in the recent health sector literature. The aim of this study was to examine the correlation between service quality and customer satisfaction as well as the correlation between service quality and customer loyalty.
Methods: The self-report questionnaires gathered from patients at army medical centres in West Malaysia were used for this purpose.
Results: The outcomes of SmartPLS path model analysis showed that service quality dimensions, namely tangible, reliability, responsiveness, assurance and empathy were significantly correlated with customer satisfaction and customer loyalty.
Conclusions: This finding confirms that the capability of service providers to appropriately implement the quality dimensions in providing medical services has enhanced customer satisfaction and customer loyalty in the organizational sample.

Key words: logistics, service quality, customer satisfaction, customer loyalty, army medical centers, SmartPLS.

INTRODUCTION

Service quality has widely been discussed since 20th century and its idea is still relevant to help today organizations in creating differentiation and gaining competitive advantage in an era of borderless world and globalization [Ali et al. 2016, Fotaki 2015, (Karatepe 2016]. In a quality management literature, service quality is often seen as a multi-dimensional construct. For example, Nordic school of thought suggests that effective service quality should have two important dimensions, namely technical quality (i.e., what customers' received from services provided by an organization) and functional quality (i.e., how an organization delivers services to customers) [Brady & Cronin 2001, Gronroos 1994]. Later, the service quality construct has been modified and simplified by US school of thought where it proposes that effective service quality should have five specific dimensions, namely tangible (physical facilities, equipment, and appearance of workers), reliability (ability to perform the promised service dependably and accurately), responsiveness (willingness to help customer and provide prompt service), assurance (knowledge and courtesy of workers and their abilities to inspire trust and confidence), and empathy (caring, individualized attention the organization provides its customers) [Ismail, Rose & Foboy, 2016, Baldwin & Sohal 2003, Parasuraman, Berry & Zeithaml 1991, 1994, Wan Edura & Jusoff 2009].

However, these quality school of thoughts have different perspectives, the source of their ideas are developed based on individual attitudes and perceptions [Sriram, Chintagunta & Machanda 2015, Yuen & Thai 2015].

This view believes that service quality is an important outcome of comparison between customer expectations before and after their experience of the service [Gronroos 2007]. If customers view that their expectations for service performance conform their perceptions of the service, this situation may lead to induce the notion of service quality [Gronroos 2007, Kitapci, Akdogan & Dortyol 2014, Zeithaml 1988].

A review of the recent literature pertaining to workplace quality published in the 21st century highlights that tangible, reliability, responsiveness, assurance and empathy are generic service quality components that are applicable to be used by researchers and practitioners to assess the effectiveness of service quality in various types of service sector such as banking [Kranias & Bourlessa 2013, Sangeetha, Mahalingam 2011], retailing [Ahmad, Ihtiyar, Omar 2014, Vera, Trujillo 2013], supply chain and logistics [Yeo, Thai, Roh 2015, Yuen, Thai 2015], telecommunication [Segoro 2013, Yen, Lu 2008]; hotel [Akbar et al. 2010, Raza et al. 2012], aviation [Gemmel 2007, Hussain Al Nasser, Hussain 2015]; defense and security [Ismail et al. 2014, Ridzuan et al. 2013] health [Ismail, Zaki, Rose 2016, Wan Edura, Jusoff 2009].

Unexpectedly, a thorough investigation of successful service based organization reveals that the ability of service providers to appropriately implement tangible, reliability, responsiveness, assurance and empathy in executing daily job may have a significant impact on positive customer outcomes especially customer satisfaction [Azman et al. 2016, Hussain et al. 2015, Rao Kondasani, Panda 2015] and customer loyalty [Akbar et al. 2010, Kitapci et al. 2014, Yeo et al. 2015].

Customer satisfaction is broadly defined as a difference between customers' expectations and experience performance after using a service and/or product at a certain period [Azman, Ilyani Ranlan et al. 2016, Mosahab, Mahamad & Ramayah 2010].

While, customer loyalty is often related to as the willingness of customers to repeatedly purchase a good or service that is accompanied by psychological bond and hold favorable attitudes toward a good or toward the organization supplying the goods or services [Deng et al. 2010, Gede Mahatma Yuda Bakti & Sumaedi 2013, Yeo et al. 2015]

Within a workplace service quality model, many researchers concur that service quality, customer satisfaction and customer loyalty are distinct, but strongly interrelated constructs. For example, the ability of service providers to appropriately implement service quality in executing daily job may lead to greater customer satisfaction [Azman, Hafizah et al. 2016, Hussain et al. 2015] and customer loyalty [Bardauskaite 2014, Lee & Lambert 2008].

Although this relationship has widely been investigated, the predicting variable of service quality is little explained in the service quality model of service based organization. Many researchers argue that this condition may be caused by several reasons: first, previous studies have much conceptually discussed the definitions, purposes and disconfirmation paradigms of effective service quality dimensions in service organizations [Azman, Hafizah et al. 2016, Wan Edura&Jusoff 2009].

Second, previous studies mostly use a simple analysis methods and gap analysis method to describe customer attitudes toward technical and functional aspect and make comparison between after and before service and/or product deliveries [Donnelly et al. 2006, Mohsin & Cyril De Run 2010, Naik & Byram 2016, Wisniewski 2001]. Consequently, these studies have produced general recommendations and this may not adequate to be used as important guidelines by practitioners to understand the complexity of service quality nature and formulate strategic action plans to enhance the effectiveness of service quality in various types of service based organization [Azman, Hafizah & Ilyani 2016, Kondasani & Panda 2015, Kitapcia, Akdogan, Dortyol 2014, Yeo, Thai & Roh 2015]. Hence, this situation motivates the researchers to fill in the gap of literature by quantifying the effect of service quality on customer outcomes.

This study has twofold objectives: first, to examine the correlation between service quality and customer satisfaction. Second, to examine the correlation between service quality and customer loyalty.

LITERATURE REVIEW

Service Quality

Parasuraman et al.'s, [1988] develop a gap analysis model to measure the influence of service quality based on the integrated view of consumer-company relationship. This model provides five generic dimensions of service quality, namely tangible, reliability, responsiveness, assurance and empathy. For example, if customers view that the implementation of quality dimensions in executing daily job will strongly fulfill their needs and expectations, this situation may lead to induced positive customer behavior. The spirit of this theory gained strong support from the service quality research literature.

Several recent studies were conducted using a direct effects model to examine service quality in different service based organization such as 357 patients at dental care in Australia [Baldwin & Soha, 2003], 1,261 customers at a large chain department store in Victoria, Australia [Wong & Sohal 2003], 183 customers at the Marmara University Hospital in Turkey [Ozturkcan et al. 2009], 105 hotel guests in Penang [Akbar et al. 2010], 749 patients at public and private hospitals in Saudi Arabia [Al-Borie & Damanhouri, 2013], 377 customers at telecommunication firms in Jordan [Muhammed et al. 2014], 369 patients facing a range of services at hospital polyclinics in Turkey [Kitapci et al. 2014], 253 passenger Dubai International Airport Terminal 3 [Hussain et al. 2015], 313 members of the Korean Port Logistics Association [Yeo et al. 2015], 475 patients at five Indian private hospitals [Rao Kondasani & Panda 2015], 100 customers at armed forces health organizations in Peninsular Malaysia [Azman, Hafizah et al. 2016]. These surveys reported that the capability of service providers to appropriately practice tangible, responsive, reliable, assured and emphatic in performing daily job had enhanced positive customer outcomes, especially customers' satisfaction [Al-Borie & Damanhouri 2013, Ozturkcan et al. 2009, Ismail, Zaki & Rose 2016, Baldwin & Sohal, 2003, Hussain et al. 2015, Rao Kondasani & Panda 2015] and customer loyalty [Akbar et al. 2010, Kitapci et al. 2014].

Customer Loyalty

Customer loyalty is often related to as the willingness of customers to repeatedly purchase a good or service that is accompanied by psychological bond and hold favorable attitudes toward a good or toward the organization supplying the goods or services [Deng et al. 2010, Wong & Sohal 2003, Gede Mahatma Yuda Bakti & Sumaedi, 2013, Prakash, 2011; Yeo et al. 2015].

The quality of service can bring customer intention to use the service again. These will bring the loyalty of the customer to the business. Service quality came as a superior quality to customer and brings the customer loyalty [Zeithaml, Berry & Pasuraman 1996] and there are strong relationships between service quality and customer loyalty [Kuo, Wu & Deng 2009, Saura et al. 2008].

The good quality of service will convincingly client to repeat the demand of service. It show customer behavioural towards service provider. The quality of service that fulfills customer expectation will gain the customer loyalty. This intention will make customers' favorable inclination a service relative to other firms offering the same service [Kaura, Prasad & Sharma 2015].

Further studies show that customers' loyalty as an important outcome of the relationship between service quality and customers' satisfaction. The effect of customers' satisfaction in relationships is often measured using an indirect effects model based on various samples such as perceptions of 542 shoppers at the retail department store context [Sivadas & Baker-Prewitt 2000], 500 respondents at the Chinese Petroleum Corporation [Bei & Chiao 2006], 505 supermarket customers in Turkey [Kitapci et al. 2013] and 300 Islamic banking customers located in the city of Kuching, Malaysia [Muahmmad et al. 2015].

Findings from these surveys showed that the ability of service providers to appropriately implement tangible, responsiveness, reliability, assurance and empathy in performing daily work had strongly invoked customer satisfaction. Consequently, it could lead to an enhanced customers' loyalty [Bei & Chiao 2006, Muahmmad et al., 2015, Kitapci et al. 2013, Sivadas & Baker-Prewitt 2000].

Customer Satisfaction

In a quality management and marketing literature, customer satisfaction is often viewed as a function of transaction-specific satisfaction and multiple transaction-specific satisfactions [Fornel 1992, Rust&Oliver 1994]. Under this view point, for example, customer satisfaction is defined based on several perspectives such as a decision made by customers about the service quality, product quality and price [Parasuraman et al. 1991, Zeithaml et al. 1996], an inner view resulted from customer's own experience from the service, an output of customers' comparison between expected performance and actual performance [Churchill & Surprenant 1982, Rosen, Surprenant & Rosen 1998], a series of customer post experience decisions with a product or service over time [Clemes, Gan & Ren 2011, Fournier & Mick 1999] and a difference between customers' expectations and experience performance after using the particular services [Kotler & Clarke 1985, Ramayah, Osman & Rahbar 2010]. The discussion shows that customer satisfaction is achieved if a customer feels that services delivered by a service provider may fulfill his/her needs, expectations and/or goals.

Several studies has been done to test the relationship between service quality and customer satisfaction such as Thai [2015] with 175 respondent from Singapore Shipping Association and Singapore Logistics Association, Bellingkrodt & Wallenburg [2015] with 778 respondents from IT service provider company and Herman [2014] 200 students involved.

The literature has been used as foundation of establishing a theoretical framework for this study as exhibited in Figure 1.
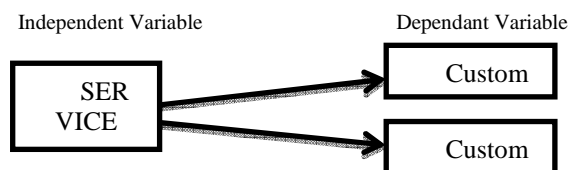

Fig. 1. The theoretical framework for this study
Rys. 1. Teoretyczny schemat badań

Based on the framework, it can be hypothesized that:

H1: There is a positive relationship between service quality (i.e., tangible, reliability, Responsiveness, assurance and empathy) and customer satisfaction.

H2: There is a positive relationship between service quality (i.e., tangible, reliability, Responsiveness, assurance and empathy) and customer loyalty.

METHOD

Sample and procedure

The research utilized a cross-sectional technique because it allowed the researchers to blend library study and survey questionnaire as the main procedure of collecting data for this study. The main advantage of using this procedure may help the researchers to gather accurate, less bias and high quality data at the studied organizations [Creswell 2003, Sekaran 2000].

The target population of this study was patients who are receiving medical treatment service at Malaysia army medical center. This organization is managed by Department of Health Service of the Ministry of Defense, Malaysia. The personnel came from army staff that is well-trained as health practitioners such as doctors and staff nurses. At the beginning of this study, a survey questionnaire was drafted based on service quality literature. Further, a back translation technique was employed to translate the survey questionnaires in English and Malay versions in order to enhance

the validity and reliability of the research findings [John W Creswell 1998, Sekaran & Bougie 2010]

A purposive sampling was utilized to distribute 400 survey questionnaires to patients who received treatments at the organizations. This sampling technique was chosen because the head of organization had not provided the list of patients who received treatments and this situation did not allow the researchers to select patients using a random technique. Of the total number, 128 respondents sent the survey questionnaires to the researchers, yielding 32 percent response rate. They answered the survey questionnaires based on their consents and a voluntarily basis.

Measures

The survey questionnaire consists of three sections: first, service quality features, namely tangible had 3 items, reliability had 7 items, responsiveness had 10 items, assurance had 5 items and empathy had 4 items that were adapted from service quality literature [Al-Borie & Damanhouri 2013; Azman, Hafizah et al. 2016, Parasuraman, Zeithaml & Berry 1985, Wong & Sohal 2003]. The dimensions used to measure tangible were adequate equipment, suitable equipment, suitable location and communication network. The dimensions used to measure reliability were solving, good service, schedule and performance. The dimensions used to measure responsiveness were feedback, priority, take care and urgent action. The dimensions used to measure assurance were comfortable, polite, confident, no complaint and believe. The dimensions used to measure empathy were cooperation, understanding and delivery. Second, customer satisfaction had 7 items which were adapted from the quality related customer satisfaction literature [Azman & Norashyikin 2009, Hussain et al. 2015, Izogo & Ogba 2015, Rao Kondasani & Panda 2015]. The dimensions used to measure customer satisfaction were treatment, communication and expectation. Third customer loyalty also had 7 items that were adapted from service quality related customer loyalty [Akbar et al. 2010, Kitapci et al. 2014, Muhammed et al. 2014]. The dimensions used to measure customer loyalty repurchase a good or service

and favorable attitudes toward a good or service. Demographic variables were only used as controlling variables because this study focused on customer attitudes

Data Analysis

The study used SmartPLS 2.0 to analyze the survey questionnaire data because it may deliver latent variable scores, avoid small sample size problems, estimate every complex models with many latent and manifest variables, hassle stringent assumptions about the distribution of variables and error terms and handle both reflective and formative measurement models [Henseler, Ringle & Sinkovics 2009] This technique analyzed the data using the following steps: first, determine construct and item validities using convergent and discriminate validity analyses. Second, evaluate construct reliability using a composite reliability analysis. Third, construct the structural model by examining the path coefficients using standardized betas (β) and t statistics (t >1.96). Finally, calculate the value of R^2 as an indicator of the overall predictive strength of the model (i.e., 0.19 (weak), 0.33 (moderate) and 0.67 (substantial) [Chin 2010, Henseler et al. 2009]. Fifth, measure the value of Q^2 as a criterion to assess the model's predictive relevance (i.e., 0.02 (weak), 0.15 (medium) and 0.35 (large) [Hair et al. 2014].

RESULT

The table 1 shows that the majority respondent characteristics were male (59%), ages between 21 to 30 years old (38%), non-married employees (83%), army patients (98%), patients who received ordinary treatments (94%), patients who received one time treatment in a month (77%).

Table 2 show that the factor loadings and cross loadings from different constructs, and composite reliability for different constructs. The variables weighted down more strongly on their own constructs in the model and if the result is greater than 0.70 then the items were considered adequate. Besides, the correlation between items and factors had higher loadings than other items in the different constructs

[Chin 2010, Fornell & Larcker 1981, Gefen & Straub 2005], meaning that all items have met the acceptable standard of discriminant validity. Furthermore, the composite reliability showed values greater than 0.8, indicating that all the measurement scale used in this study had high internal consistency [Nunally & Bernstein 1994]. In this sense, these results confirm that the instrument used in this study has achieved the acceptable standards of validity and reliability analyses.

Table 1. Profile of respondents (n =128)
Tabela 1. Profil respondentów (n =128)

Respondent Characteristics	Sub-Profile	Percentage (%)
Gender	Male	64.1
	Female	35.9
Age	Less than 20 years	44.5
	21-30 years	45.3
	31-40 years	8.6
	More than 41 years	1.6
Marital status	Single	83.6
	Married	16.4
Patient	Army	97.7
	Army family	1.6
	Ministry Public Staff	0.8
Type of treatment	Ordinary/acute	93.8
	Chronic	0.8
	Dental	5.5
Frequency of treatment	1 time	75.8
in a month	2 to 4 times	20.3
	More than 5 times	3.9

Table 2. Factor loading and cross loading for the constructs and composite reliability
Tabela 2. Współczynnik wagowy i krzyżowy współczynnik wagowy według czynników oraz niezawodność

Construct/Items	No. Of Item	Factor Loading	Composite Reliability
Tangible	6	0.796 to 0.878	0.874
Reliability	8	0.781 to 0.900	0.944
Responsiveness	10	0.812 to 0.909	0.967
Assurance	5	0.794 to 0.939	0.931
Empathy	4	0.774 to 0.881	0.907
Customer Satisfaction	7	0.827 to 0.921	0.96
Customer Loyalty	7	0.730 to 0925	0.952

Table 3 display the outcomes of convergent and discriminant validity analyses. All constructs had the values of average variance extracted (AVE) larger than 0.5 indicating that they meet the acceptable standard of convergent validity [Barclay, Higgins, Thompson 1995, Fornell, Larcker 1981, Henseler, Ringle, Sinkovics 2009]. Besides, the significance of the results with standard of convergent validity, all constructs had the values of AVE square root in diagonal greater than the squared correlation with other constructs in off diagonal, confirming that all constructs met the acceptable standard of discriminant validity [Henseler et al. 2009].

Table 4 shows the results of variance inflation factor and descriptive statistics. The means for the variables assortment range between 5.27 and 5.69, showing that the levels of tangible, reliability, responsiveness, assurance, empathy, customer satisfaction and customer loyalty are in the range of high (4) and highest (5) levels. The values of variance inflation factor for the relationships: (a) between the independent variable (i.e., tangible, reliability, responsiveness, assurance

and empathy) and dependent variable (i.e., customer satisfaction and customer loyalty) were lower than 5.0, signifying that the data were not affected by serious multicollinearity

problem [Hair et al. 2014]. Thus, this measurement model fulfilled the validity criteria.

Table 3. Fornell-Larcker criterion test
Tabela 3. Test kryteriów Fornell-Larcker'a

Construct/Items	AVE	1	2	3	4	5	6	7
Tangible	0.698	**0.836**						
Reliability	0.679	0.615	**0.824**					
Resposiveness	0.745	0.599	0.700	**0.863**				
Assurance	0.731	0.404	0.57	0.554	**0.855**			
Empathy	0.709	0.533	0.517	0.618	0.371	**0.0842**		
Customer Satisfaction	0.773	0.315	0.671	0.404	0.586	0.368	**0.87**	
Customer Loyalty	0.742	0.218	0.628	0.377	0.477	0.480	0.71	**0.862**

Table 4. Variance Inflation Factor and descriptive statistics
Tabela 4. Współczynnik wariancji inflacji oraz statystyka opisowa

Variable	Mean	Standard Deviation	Variance Inflation Factor						
			1	2	3	4	5	6	7
1. Tangible	5.61	0.63						1.857	1.857
2. Reliability	5.58	0.73						2.435	2.435
3. Responsiveness	5.69	0.67						2.617	2.617
4. Assurance	5.31	0.80						1.592	1.592
5. Empathy	5.56	0.63						1.741	1.741
6. Customer Satisfaction	5.27	0.85							
7. Customer Loyalty	5.33	0.85							

Significant at **p<0.01

Table 5 shows that the inclusion of service quality components (i.e., tangible, reliability, responsiveness, assurance and empathy) in the analysis explained contribution at 55 percent of the variance in customer satisfaction. In terms of explanatory power of this model, it provides a moderate support for the overall model [Hair et al. 2014]. Further, the outcomes of testing the research hypotheses showed five important findings: first, tangible was not significantly correlated with customers' satisfaction (B=0.159; t=1.823), therefore H1a was not supported. Second, reliability was significantly correlated with customers' satisfaction (B=0.675; t=5.344), therefore H1b was

supported. Third, responsiveness was significantly correlated with customer satisfaction (B=0.248; t=2.368), therefore H1c was supported. Fourth, assurance was significantly correlated with customers' satisfaction (B=0.346; t=4.176), therefore H4 was supported. Fifth, empathy was not significantly correlated with customers' satisfaction (B=0.353; t=4.076), therefore H5 was supported. In sum, this result demonstrates that tangible and empathy are not important predictors of customer satisfaction. Conversely, reliability, responsiveness and assurance are important predictors of customers' satisfaction.

Table 5. The Outcomes of Testing H1
Tabela 5. Wyniki testowania H1

Structural Path	Path Coefficient	R^2
H1a: Tangible à Customer Satisfaction	β=0.159 (*t*=1.823)	
H1b: Reliability à Customer Satisfaction	β=0.675 (*t*=5.344)*	
H1c: Responsiveness à Customer Satisfaction	β=0.248 (*t*=2.368)*	0.551
H1d: Assurance à Customer Satisfaction	β=0.353 (*t*=4.076)*	
H1e: Empathy à Customer Satisfaction	β=0.125 (*t*=1.423)	

Significant at *>1.96

Table 6. The Outcomes of Testing H2
Tabela 6. Wyniki testowania H2

Structural Path	Path Coefficient	R^2
H2a: Tangible à Customer Loyalty	β=0.349 (*t*=3.646)*	
H2b: Reliability à Customer Loyalty	β=0.697 (*t*=7.242)*	
H2c: Responsiveness à Customer Loyalty	β=0.272 (*t*=2.271)*	0.572
H2d: Assurance à Customer Loyalty	β=0.246 (*t*=3.578)*	
H2e: Empathy à Customer Loyalty	β=0.388 (*t*=3.041)*	

Significant at *>1.96

As an extension of testing the research hypotheses, a test of predictive relevance for the reflective endogenous latent variable was further conducted based on Stone-Geisser's formula: q2= Q2included-Q2excluded/1-Q2 included=0.417. The result was greater than zero (0) for the reflective endogenous latent variable, indicating that it has predictive relevance [Hair et al. 2014].

Table 6 shows that the relationship of service quality components (i.e., tangible, reliability, responsiveness, assurance and empathy) in the analysis explained contribution at 57 percent of the variance in customer satisfaction. In terms of explanatory power of this model, it provides a moderate support for the overall model (Hair et al. 2014). Further, the outcomes of testing the research hypotheses showed five important findings: first, tangible was significantly correlated with customers' satisfaction (B=0.349; t=3.646), therefore H2a was supported. Second, reliability was significantly correlated with customers' satisfaction (B=0.697; t=7.242), therefore H2b was supported. Third, responsiveness was significantly correlated with customer satisfaction (B=0.272; t=2.271), therefore H2c

was supported. Fourth, assurance was significantly correlated with customers' satisfaction (B=0.246; t=3.578), therefore H2d was supported. Fifth, empathy was significantly correlated with customers' satisfaction (B=0.388; t=3.041), therefore H2e was supported. In sum, this result demonstrates that tangible, reliability, responsiveness, empathy and assurance are important predictors of customers' satisfaction.

As an extension of testing the research hypotheses, a test of predictive relevance for the reflective endogenous latent variable was further conducted based on Stone-Geisser's formula: q2= Q2included-Q2excluded/1-Q2 included=0.411. The result was greater than zero (0) for the reflective endogenous latent variable, indicating that it has predictive relevance [Hair et al. 2014].

DISCUSSION

The findings of this study show that service quality does act as an important predictor of customer satisfaction and customer loyalty. In the context of this study, management has taken proactive actions to plan, maintain,

and monitor their services to customers based on the broad policies and procedures established by their stakeholders. The majority respondents view that the levels of service quality (i.e., tangible, reliability, responsiveness, assurance, and empathy), customer satisfaction and customer loyalty are high. This situation describes that the capability of service providers to appropriately implement tangible, reliability, responsiveness, assurance, and empathy in performing daily job may lead to greater customer satisfaction and customer loyalty in the organizations.

This study provides three major implications: theoretical contribution, robustness of research methodology, and practical contribution. With respect to theoretical contribution, the findings of this study showed two important findings: first, service quality does act as an important predictor of customer satisfaction. This finding also has supported and broadened studies done by (Baldwin, Sohal 2003, Ozturkcan et al. 2009, Al-Borie & Damanhouri 2013, Hussain et al. 2015, Kondasani & Panda, 2015, Ismail et al. 2016]. Second, service quality does act as an important predictor of customer loyalty. This finding also has supported and extended studies by [Wong & Sohal 2003, Akbar et al. 2010, Kitapci et al. 2013, Muhammed et al. 2014]

The credibility of research methodology is maintained by ensuring that the survey questionnaire used in this study satisfactorily met the acceptable standards of validity and reliability analyses. This condition may lead to produced accurate and reliable findings. Further, in terms of practical contribution, the findings of this study can be used as important guidelines by management to improve the implementation of service quality in Malaysian army health centers. In order to support this aim, management should give more focus on the following aspects: first, leaders' coach should be promoted between senior management and middle management, middle management and low management levels, and low management and supporting employees in order to upgrade their soft skills and confident levels in dealing with different customer backgrounds. Second, employees who have high commitment with quality service and able

to satisfy their customer needs should be provided extra monetary and non-monetary rewards in order to retain and motivate them to support their stakeholder's needs and expectations. Third, recruitment policy and career path strategy should be properly set up in order to select competent and experienced employees to fill senior management positions. Their capabilities may be used to mentor, coach and counsel juniors managers in appropriately practicing service quality based on international quality health management standards. Fourth, knowledge management strategy must be stimulated in order to motivate employees learn new knowledge, up to date skills, latest abilities and positive attitudes, and encourage them to apply what they have learned to improve delivery of service quality to customers. Finally, communication openness between organization and customers should be promoted through disseminating and sharing service quality policies and procedures via printed materials, online and face to face interaction. This communication style may decrease misconceptions, prejudices and increase good rapports between customers and service providers. If these suggestions are given more attention this may lead to maintain and support the organizational strategy and goals.

CONCLUSION

This research tested a conceptual schema developed based on relevant service quality research literature. The measurement scale used in this study met the acceptable standards of the validity and reliability analyses. The outcomes of SmartPLS path model analysis confirmed that service quality was significantly correlated with customer satisfaction and customer loyalty, therefore H1 and H2 were supported. This finding explains that the capability of service providers to appropriately implement the service quality dimensions, namely tangible, reliability, responsiveness, assurance and empathy may enhance customer satisfaction and customer loyalty in the organizations. This result also has supported and enriched service quality studies mostly published in developed countries. Therefore, current study and practice within organizational quality models need to

incorporate tangible, reliability, responsive-ness, assurance and empathy as key dimensions of the service quality domain. This study further suggests that the capability of service providers to plan and apply the service quality dimensions in executing daily job will strongly enhance subsequent positive customer outcomes (e.g., behavioural intentions and trust). These positive behaviour may lead to maintained and enhanced the organizational performance in an era of global economy and borderless world.

This study has several limitations in terms of methodological and conceptual framework. First, a cross-sectional research design used in this study may not capture causal connections between the variables of interest. Second, the sample for this research was only taken from armies and their families who received treatments at Malaysian army medical centers. Finally, the results of SmartPLS path model analysis have not assessed the relationship between specific components for the independent variable and dependent variable. Due to these limitations, it may decrease the ability of this study to generalize of its results to other organizational settings

In order to strengthen a future research in this area, certain aspects of this study need to be improved. First, several customer service and personal characteristics should be further discovered, where this may show meaningful perspectives in understanding how the similarities and differences among customers affect the implementation of service quality by organizations. Second, a longitudinal study is another research design type should be utilized to collect data because it may clearly describe the forms of change and the direction and magnitude of causal relationships amongst variables of interest. Third, to fully understand the effect of service quality on customer outcomes, varied organizations need to be involved. Fourth, the number of sample size should be increased in order to represent the studied population and this may lead to lower response bias in survey method. Fifth, other specific theoretical constructs of service quality such as technical and functional qualities need to be considered because they have widely been acknowledged as an important link between service quality and

many aspects of customer outcomes [Gronroos 2007, Hussain et al. 2015, Rao Kondasani & Panda 2015].

Finally, other specific dimensions of customer outcomes such as readiness to recommend, retention and word of mouth need to be given attention because they are widely recognized as critical customer outcomes in many service quality research literature [Azman, Hafizah et al. 2016, Yeo et al. 2015].Thus, the significance of these issues needs to be explored in future research.

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POZIOM OBSŁUGI KLIENTA JAKO WZKAŹNIK POZIOMU ZADOWOLENIA KLIENTA ORAZ LOJALNOŚCI KLIENTA

STRESZCZENIE. **Wstęp:** Poziom obsługi klienta, zadowolenia klienta jak i lojalność klienta to zagadnienia, którym ostatnio poświęca się sporo uwagi w fachowej literaturze dotyczącej ochrony zdrowia. Celem tej pracy było zbadanie występowania zależności pomiędzy jakością obsługi i zadowoleniem klienta jak również zależnością pomiędzy jakością obsługi i lojalnością klienta.

Metody Badania zostały przeprowadzone przy użyciu ankiety wśród pacjentów wojskowych centrów medycznych na terenie Zachodniej Malezji**.**

Wyniki: Wyniki uzyskane przy zastosowaniu analizy SmartPLS wskazują, że takie składowe jakości obsługi jak: konkretność, niezawodność, odpowiedzialność, bezpieczeństwa i empatia są istotnie skorelowane z zadowoleniem klienta oraz lojalnością klienta.

Wnioski: Otrzymane wyniki potwierdzają możliwość dostawcy usług na takie kształtowanie oferowanych usług medycznych, aby zwiększyć poziom zadowolenia klienta oraz jego lojalności.

Słowa kluczowe: jakość obsługi, zadowolenia klienta, lojalność klienta, wojskowe centra medyczne, SmartPLS

KUNDENSERVICE ALS INDIKATOR DES NIVEAUS DER KUNDENZUFRIEDENHEIT UND -LOYALITÄT

ZUSAMMENFASSUNG. Einleitung: Das Niveau des Kundenservices, der Kundenzufriedenheit und der Kundenloyalität stellen die Fragen dar, denen in der letzten Zeit viel Aufmerksamkeit in der die Gesundheitspflege anbetreffenden Fachliteratur gewidmet wird. Das Ziel der Arbeit war es, das Auftreten von Abhängigkeiten zwischen der Qualität der Kundenbetreuung und der Kundenzufriedenheit sowie der Abhängigkeit der Kundenservice-Qualität und der Kundenloyalität zu ermitteln und zu erforschen.

Methoden: Die betreffenden Forschungen wurden bei der Inanspruchnahme von Fragebögen unter den Patienten medizinischer Militärzentren auf dem Gebiet des westlichen Malesiens durchgeführt.

Ergebnisse: Die dank der Anwendung der SmartPLS-Analyse ermittelten Ergebnisse weisen darauf hin, dass solche Bestandteile der Qualität des Kundenservices wie: Greifbarkeit, Zuverlässigkeit, Verantwortlichkeit, Sicherheit und Empathie im direkten Zusammenhang mit der Kundenzufriedenheit und -loyalität stehen.

Fazit: Die gewonnen Resultate bestätigen die Möglichkeit einer solchen Ausgestaltung der durch den Dienstleister angebotenen medizinischen Dienstleistungen, die das Niveau der Kundenzufriedenheit und -loyalität zu erhöhen vermögen.

Codewörter: Kundenservice-Qualität, Kundenzufriedenheit, Kundenloyalität medizinische Militärzentren, SmartPLS-Analyse

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