Determinants of pet owner's loyalty using modified SERVQUAL

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CHRONICLE	ABSTRACT
	The objective of the current study is to explore the factors affecting customer loyalty towards service quality at veterinary clinics in Kuala Lumpur. As veterinary clinic engaged with service businesses, it is fundamental to focus on the client's perception of their service. A modified version of SERVQUAL was used to assess the service quality of the veterinary clinics. The total number of 200 respondents conveniently selected in this study, and the pre-tested questionnaires which contains five segments; demographic profile of the respondent, the expectations and perceptions of clients about the service quality of the veterinary clinic, client satisfaction, and loyalty respectively were randomly circulated. The service quality dimensions investigated in the research were tangible, reliability, responsiveness, assurance, empathy, accessible, animal welfare, and pricing. The collected data were analyzed using SPSS software, and tabulated as descriptive, correlation, and regression analysis. All the dimensions which were used are significantly correlated with each other. The service quality dimensions; tangible, responsiveness, assurance, empathy, accessible, animal welfare were the key antecedents of the customer loyalty. Thus, in order to maintain competitive in business, the veterinary clinics should improve their quality of service with the aim of attract new customers, and maintain the business as profitable manner.

1. Introduction

The demand for high quality veterinary healthcare service such as for farm animals (Blach, 2009; Derks et al., 2012), and pets continues to rise in recent years because of increment in the quantity of animal ownership (Cito et al., 2016). Presently, there are an aggregate of 2,512 veterinarians across the nation enrolled with the Malaysian Veterinary Council (MVC). It represents the proportion of veterinary surgeons to one for each 12,000 Malaysians - an expansion from 1: 15,000 in 2015. Yet, Malaysia needs more than double the current number of veterinarians, so as to accomplish the perfect proportion of one veterinary surgeon per population of 5,000, as observed in developed countries for example, the USA (STAR, 2019). To improve preventive veterinary care, Animal Welfare Act 2015 was established and enforced by Department of Veterinary Services (DVS) Malaysia. The act could ensure animal owners to find a way to guarantee that the necessities of the animals are satisfied, which includes its requirement for an ideal surrounding and diet, to display its typical behavioural patterns, to be accommodated with or separated from other animals, and to be shielded from injury, disease, pain, and suffering (Animal Welfare Act, 2015). Together with DVS, private veterinary clinics also provide preventive veterinary healthcare. Private

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veterinary clinics needs to ensure pet owners continuously seek veterinary healthcare advices from licensed veterinarians which could improve animal welfare (Soares et al., 2017), reduce the risk of zoonotic disease transmission (Hodgson et al., 2015) and reduce antibiotic resistance (Damborg et al., 2016). Improving the pet owner's loyalty is therefore an utmost importance to veterinary clinics (Soares et al., 2017).

"Customer loyalty is defined as repeat purchase, self-stated retention, price insensitivity, resistance to counter persuasion, recommendation to others" (Rai & Srivastava, 2012, p. 51), and to commit a higher share of spending (Keiningham et al., 2007) to veterinary clinic. So as to create and support loyalty among clients, it is essential to investigate what determines the loyalty in a specific marketplace, where the first necessary step is by improving customer service satisfaction (Simanjuntak et al., 2020a). The satisfaction of the customer service is an element of customers' understanding and responses to a supplier's behavior during the service delivery (Abdullah & Rozario, 2009; Simanjuntak et al., 2020b). Service is defined as performance that consists of four important qualities: heterogeneity, perishability, inseparability, and intangibility (Parasuraman et al., 1985). "Service quality is defined by customers who have experienced that service and used their experience to form a judgement" (Abdullah & Rozario, 2009, p. 347). As such, measuring the quality of a service at veterinary clinic can be a very difficult task due to its transcendent value and no specific tangible characteristic to measure.

"Customer is the user of the products or services produced by the company and judge those products' quality with other people. Moreover, customer might be an individual or business that acquisition the goods or services offered by a company" (Ranabhat, 2018, p. 25). Therefore, the customer is the one who create the demand for goods and services and directly responsible for profit in a business. In spite of the fact that there are numerous elements influencing the loyalty of consumers, the perception of service quality is identified as the most vital factor among them. Thus, service provider such as veterinary clinics should understand how their services are being perceived to improve competitiveness (Blach, 2009). Due to the increasing trend of globalization and commercialization, the demand of customers also shifted where their desires for nature of goods and services are increasing as well (Nawaz et al., 2016), and needs to be evaluated. In this case, the SERVQUAL model introduced by Parasuraman et al. in 1985 is commonly utilized to evaluate the clients' desires of the service and their perceptions of the real service performance level (Parasuraman et al., 1985). A study conducted in Sri Lanka used only perception questionnaire SERVPERF showed that the veterinary clinics needed to improve responsiveness and assurance to improve the satisfaction (Dassanayake & Weerasiri, 2016). Client loyalty means the achievement of the suppliers to develop strong relationship with their customers, and achieve rewards in cooperating with its customer. It is the propensity to choose a precise item over all others due to satisfaction with the good or service. The customer loyalty wishes customers to purchase all the more reliably. The loyalty may be item specific or it may be company specific. When a loyal customer purchases the similar item repeatedly then he may be defined as product or brand specific loyal. But, the clients might likewise purchase various items of the similar producer then they might be called as organization specific loyalty (Management Study Guide, 2008).

The loyalty has three well known conceptualizations. Firstly, attitudinal loyalty (AL) as an attitude that directs to an association with the brand. Secondly, behavioural loyalty (BL) in terms of uncovered behaviour such as the pattern of past purchases, and finally purchasing moderated by the person's qualities, purchase situation, and the circumstances (Uncles et al., 2003). Brawn (2018) explained that, AL has a positive association with correspondence at numerous focuses in a veterinary health center, while the association with BL was not as clear. Additionally, Brawn (2018) suggested that AL also has a solid positive association with behavioral intentions, which expands the quantity of items and services that a pet- proprietor consumes at a veterinary clinic (Brawn, 2018). Providing and ensuring consumer loyalty and their perception in a business is important in terms of increasing an organisation revenues through repeated purchase. As such, Kondasani and Panda's (2015) findings indicated that the service seeker-service provider association, the interaction with supporting staff, and quality of facilities have a positive impact on client perception (Kondasani & Panda, 2015). While, in another previous study, patient's perceptions of service quality have been demonstrated to be responsible for 17-27% of the variation in a medical clinic's financial measures for example, earnings, return on assets and net revenue (Aliman & Mohamad, 2016). It is imperative that, factors responsible for pet owner's loyalty must be discovered before structuring and executing the policies for client loyalty, and retention. Research has been conducted on customer loyalty, satisfaction, either for farm animals and pet animals. However, only a few numbers of research have been examined the pet owner's loyalty, satisfaction and service quality perception and expectation in veterinary settings using the SERVQUAL originated by Parasuraman et al. in 1985. Many modifications have been done to improve the SERVQUAL model. Initially, the developers recognized ten service quality measurements which are credibility, reliability, access, tangible, communication, understanding, competence courtesy, security, responsiveness, and knowing clients. The final model was then reduced to only five dimensions; reliability, tangible, empathy, responsiveness, and assurance (Butt & de Run, 2010). Therefore, investigation of the service quality and satisfaction that influence customer loyalty towards veterinary clinics in Kuala Lumpur was the main objective of the current study. It examined service quality for animal welfare using the modified model of the SERVQUAL. The following hypotheses are developed based on the above literature;

1.1 Hypotheses

H_a1:   A noteworthy difference exists between gender and customer satisfaction.
H_a2:   A significant difference exists between gender and customer loyalty.
H_a3:   A noteworthy positive relationship exists between service quality dimensions and customer loyalty.

H$_a$4:   A significant positive relationship exists between customer satisfaction and customer loyalty.
H$_a$5:   Service quality dimensions and customer satisfaction are significant determinants of customer loyalty.

2. Methodology

2.1 The survey

The study was conducted in four veterinary clinics in the state of Kuala Lumpur (1.8 million populations in 243km^2), in which each clinic was located at the district of Ampang, Setapak, Petaling, and Cheras, respectively. At each veterinary clinic, 50 questionnaires were distributed randomly to pet owners, making in total 200 respondents were participated. They were asked to fill up the modified SERVQUAL questionnaire that contained their perceptions and expectations of the veterinary service satisfaction, quality, and loyalty. The modified SERVQUAL questionnaire was first validated with practicing veterinarians at University Veterinary Hospital (UVH), Universiti Putra Malaysia (UPM). The questionnaire was then tested through convenient sample to 30 pet owners who visited a veterinary clinic and a veterinary hospital.

2.2 Modified SERVQUAL questionnaire

The questionnaire developed for the study was comprised five segments. The first part covers demographic characteristics of the respondents such as, age, gender, ethnicity, and marital status. The second and third sections contain five dimensions of the SERVQUAL measurements as suggested by Parasuraman et al. (1985), and they are; reliability, tangibles, assurance, empathy, and responsiveness. The dimension reliability includes the competence of the service provider. The trustworthiness of the service provider was measured in the section of assurance. The part tangibles contain the appearance or personnel, physical facility, and equipment. Moreover, the individualized attention and care provided to the clients were measured using the section empathy, and finally the section responsiveness comprises willingness to help clients and provide timely service (Park et al., 2016). In addition, three new dimensions that suitably adapted to veterinary services environment; accessible, animal welfare and pricing. Accessible is defined as the ability for the customer to reach the veterinary clinic. As indicated by American Veterinary Medical Association (AVMA), animal welfare alludes to the animal's state, the treatment that the animal obtain is covered by different terms for example, animal husbandry, animal care, and human treatment. Pricing is defined as the whole of all qualities that client offers up to pick up the advantages of having or utilizing a product or service. The fourth and fifth sections comprise of five items which measure client satisfaction and client loyalty. Consequently, the questionnaire contained 49 items; six items for tangibles, five items to represent reliability, six items to collect data related to responsiveness, seven items to represent assurance, four items for empathy and accessible, five questions of animal welfare, two questions for pricing and five questions to get the data of customer satisfaction and loyalty. The five-point Likert Scales were utilized in items which is ranged from 1 (strongly disagree) to 5 (strongly agree) to measure customer satisfaction, service quality, and customer loyalty.

2.3 Data editing and analysis

Data were collected and edited in Excel and analyzed using IBM SPSS (version 22). Cronbach alpha test was performed to questionnaire items. Correlation test was performed for all variables. Normality test was performed to variable loyalty. Linear regression was performed with full model containing all variable. The backward analysis method was applied by excluding variable that is not significant until all variables are significant. The model was evaluated and also chosen based on R^2.

3. Results

Fig. 1 shows the demographic profile of the 200 pet owners surveyed, where majority of them were female (73%).
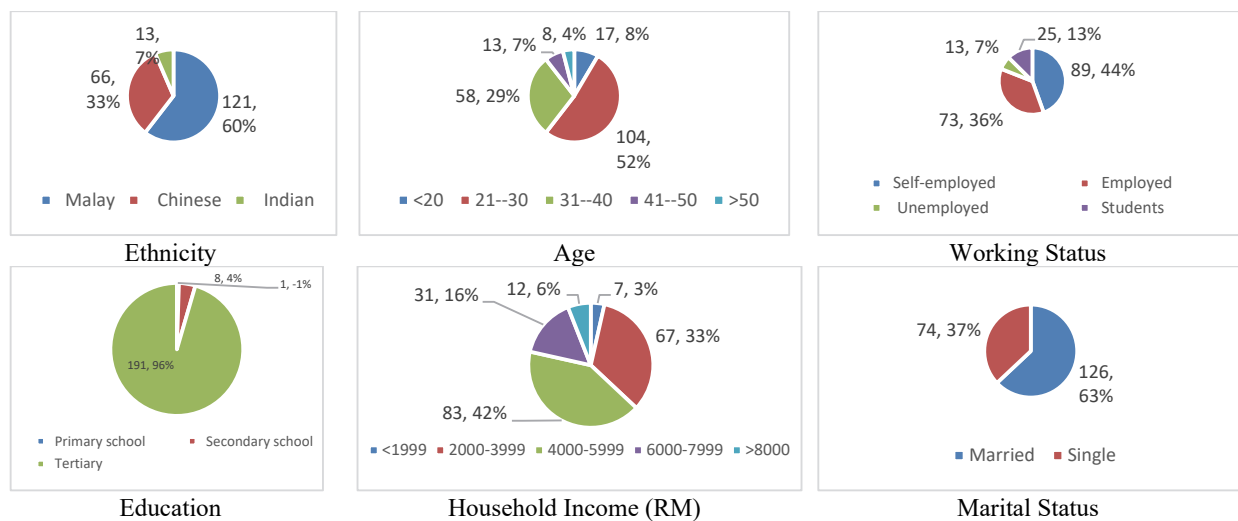

Fig. 1. Demographic profile of 200 pet owner

The mostly observed ethnic group was Malay (60.5%), and followed by Chinese (33.0%) and Indian (6.5%). The majority of the pet owners age was between 21-30 years (51%), and followed by the 31-40 years old group. About 63% of the respondents were married. The number of self-employed respondents were 89 (44.5%), followed by employed respondents (36.5%), and the students (12.5%). According to the educational background of the respondents, 1.5% has master's degree and 54% has bachelor's degree. But, 29% were diploma holders, and 11% have followed a certificate course as their educational qualification. Meanwhile, most of the respondents had a household income between Ringgit Malaysia (RM) 2,000 to RM3,999 (33.5%), and followed by the income group RM4,000-RM5,999 (41.5%). About 78.5% (n=157) that visit the veterinary clinic were cat owners, and 21.5% (n=43) were dog owners. Most of the pet owners paid between RM100 (USD23) to MR200 (74%) for the service they received at the veterinary clinic during the period that the survey was conducted. Ninety percent of the respondents sent their pets for medical issues (46.5%), and preventive care (44.5%) as shown in the Fig. 2. Thirty-eight percent of the respondents stated that the convenience as the main reason for choosing a veterinary clinic, followed by reasonable price (28%), and high-quality service (22%). It is important to note that almost 90% of the respondents have already visited the clinic previously who were selected for each survey.
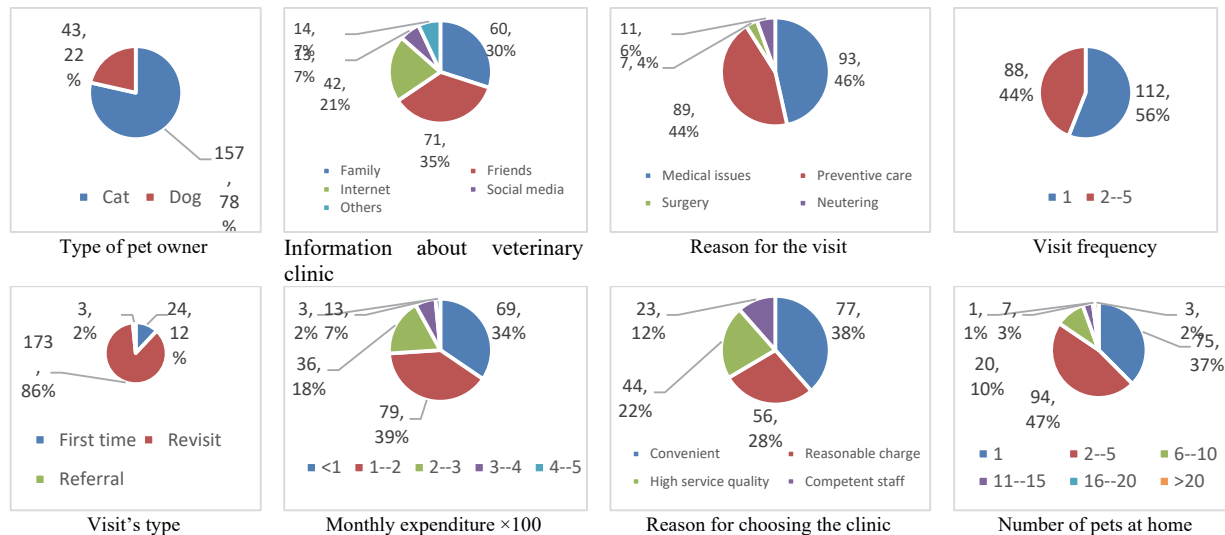

Fig. 2. Pet Owners and Veterinary Clinic Service (N=200)

Based on the Table 1, homogeneity of variance test shows a significant difference between male (n=54, SD=2.31) and female (n=146, SD=3.52) in terms of customer loyalty (F=25.33; p<0.05). Although, a big difference was not noted in the mean recorded, which is 23.33 for male and 21.86 for female, can conclude that males are more loyal towards the veterinary clinic than females. Hence, the H_a2 can be accepted. Further, independent t-test investigation, indicates in Table 1 also reveals a significant difference between male (n=54, SD=2.68) and female (n=146, SD=3.26) in terms of the service quality satisfaction (F=5.294; p<0.05), thus the H_a1 can be accepted. This verified that male have higher tendency for a better service quality and is easier to satisfy compared to female. Moreover, it is in line with the study conducted in a Saudi hospital to measure patient's satisfaction of the service quality by Al-Borie and Sheikh Damanhouri (2013), and revealed that the satisfaction levels were statistically different by gender. Further, they observed that the male patients were more satisfied about the quality of the service that they received than female patients (Al-Borie & Sheikh Damanhouri, 2013.

Table 1
Gender Differences in Customer Satisfaction and Customer Loyalty

	Gender	n	Mean	Std. Deviation	F	Sig.
Customer Loyalty	Male	54	23.3333	2.30668	25.327	.000
	Female	146	21.8562	3.51938		
	Male	54	22.4630	2.67563	5.294	.022
	Female	146	21.5411	3.26132		

*Significance p<0.05

According to the results of the Table 2, 0.792** correlation was found between customer loyalty and customer satisfaction and it indicates that they are highly correlated, and significant with each other. The customer loyalty is also moderately and significantly correlated with tangible (0.350**), reliability (0.505**), assurance (0.288**), empathy (0.324**), animal welfare (0.318**) and pricing (0.464**). But the customers are less concerned about accessible of the service (-0.056). In other words, according to the results the most vital service quality dimension on customer loyalty was reliability. The customer perceived reliability as a dominant service quality and improvements in this area can lead to customer loyalty. The findings also displayed that clients are extra concerned about the quality of the veterinary clinics that are displaying trustworthiness and well

performances. Therefore, the correlation results supported both hypotheses; H$_a$3 and H$_a$4, that shows both the customer satisfaction, and the service dimension in the SERVQUAL model are positively related to customer loyalty.

Table 2
Correlation Between Service Quality Dimensions, Customer Satisfaction and Loyalty

Dimensions	Tangible	Reliability	Responsiveness	Assurance	Empathy	Accessible	Animal welfare	Pricing	Satisfaction	Loyalty
	r	r	r	r	r	r	r	r	r	r
Tangible	1	.671**	.439**	.143*	.360**	.136	.147*	.374**	.175*	.350**
Reliability	.671**	1	.668**	.361**	.580**	.256**	.300**	.607**	.517**	.505**
Responsiveness	.439**	.668**	1	.685**	.595**	.452**	.508**	.378**	.259**	.089
Assurance	.143*	.361**	.685**	1	.541**	.312**	.122	-.017	-.057	.288**
Empathy	.360**	.580**	.595**	.541**	1	.321**	.486**	.351**	.226**	.324**
Accessible	.136	.256**	.452**	.312**	.321**	1	.400**	.211**	.075	-.056
Animal welfare	.147*	.300**	.508**	.122	.486**	.400**	1	.545**	.260**	.318**
Pricing	.374**	.607**	.378**	-.017	.351**	.211**	.545**	1	.347**	.464**
Satisfaction	.175*	.517**	.259**	-.057	.226**	.075	.260**	.347**	1	.792**
Loyalty	.350**	.505**	.089	-.28**	.324**	-.056	.318**	.464**	.792**	1

The service quality dimension that does not meet the expectations of the customers' is accessible and it represents the location, operating hours, waiting time of service delivery and mean of reaching this veterinary clinic. Therefore, accessible is the only service quality dimension that failed to satisfy the customers. Hence, focusing to improve accessible can increase both customer satisfaction and loyalty. An investigation on service quality and customer loyalty in Malaysian Islamic Insurance Sector that explored the mediating effect of customer satisfaction indicated that four out of six service quality dimensions (responsiveness, tangible, reliability, and fairness) were positively influenced the customer satisfaction which was further influenced the customer loyalty (Bhatti et al., 2017). According to the Table 3, 85% of the variation in customer loyalty can be clarified by customer satisfaction, and each service dimensions (tangible, reliability, responsiveness, assurance, empathy), accessible and animal welfare. Correspondingly, this indicates that the model was supported to the hypotheses H$_a$5 and can be accepted, since all p-values were significant. Furthermore, the model showed that the higher the satisfaction of the pet owner, the higher their loyalty to the pet clinic (β=0.671, p<0.001). The model also showed that when holding the other variable zero, the service dimension empathy has the highest customer loyalty (β=9.395, p <0.001). This is followed by service dimension either tangible (β=8.344), animal welfare (β=7.836), accessible (β=6.838), responsiveness (β=5.836) or assurance (β=4.779, p <0.05). Further, it showed that the loyalty of the customer is less than expected (negative gap score) in few areas and might be needed improvements that includes assurance (β=-2.771), responsiveness (β=-1.662) and accessible (β=-0.622, p <0.001).

Table 3
Regression Analysis Between Service Quality Dimensions, Customer Satisfaction and Customer Loyalty

Variable	β	Std. error	t	p-value
Constant	7.632	0.849	8.994	0.000
Tangible	0.862	0.195	4.421	0.000
Reliability	0.642	0.300	2.142	0.033
Responsiveness	-1.662	0.464	-3.582	0.000
Assurance	-2.771	0.418	-6.632	0.000
Empathy	1.763	0.228	7.726	0.000
Accessible	-0.622	0.174	-3.580	0.000
Animal welfare	0.468	0.151	3.095	0.002
Customer satisfaction	0.671	0.038	17.732	0.000

R=0.926*, R^2=0.857, Adjusted R^2=0.851, F= 143.203, p-value<0.000

4. Discussion

Four veterinary clinics in Kuala Lumpur were selected to conduct the research, and a higher number of pet owners from Malay race owning cats were recorded. Most of the pet owners in this study had a lower wage than the median household income in Kuala Lumpur in 2017 (RM 9,073), but majority of them were in the middle 40% income (M40). However, half of the pet owners came for preventive care and neutering, which was evident by the amount of costs that they spent for a visit was less than RM100, a reasonable amount of money they could afford and lower than the average amount that the pet owners spent at veterinary hospitals and clinics. The pet owners at urban area such as in Kuala Lumpur might realize the importance of control and prevention of diseases thus upholding welfare of the animals by visiting veterinary clinics. Preventive care is important to decrease the amount of stray animals and reduce risks of zoonotic disease transmission to humans.

In current study, additional variables were added to the five dimensions. Since animal welfare is important and in many occasions, customers have complained about the expensive costs of veterinary care, it is imperative that the inclusion of these additional dimensions, validation and testing in the current study. To the best of the authors knowledge, this is the first study on customer loyalty in veterinary clinics in Malaysia using modified SERVQUAL by adding animal welfare and accessibility in the service quality dimensions.

The one disadvantage of the modified current SERVQUAL is the addition of high number of questions and that might be affected to the willingness of customer to answer the questionnaire. Although, it affects the number of respondents who are willing to participate, it is believed that the sample size utilized in the study was sufficient, and reflect the population of veterinary clinic customers in Kuala Lumpur. The other disadvantage of the model used is the less strength of the association between loyalty and satisfaction. According to the study 85% of the pet owner's satisfaction could be explained by their loyalty. In reality, loyalty is also caused by several factors which this study have put light on. It was revealed by some researchers for example, Oliver (1999) explained that customer loyalty was also related to the bond of the pet owner with the image of veterinary hospital and the attending veterinarian (Oliver, 1999).

Descriptively more women were visited veterinary clinic compared to male. However, this study has shown that customer loyalty and satisfaction differ between genders, and indicating that the male customers were on average more satisfied and more loyal than female pet owners. Further, this finding was supported by a previous study which was conducted at Saudi hospital by Al-Borie and Sheikh Damanhouri in 2013. Most of the participated pet owners in the study got their information about the veterinary clinic through their family and friends (65.5%), and most probably they were visited the veterinary clinic previously. The results also showed that 86.5% of the pet owners who were participated in this study were previous clients of the veterinary clinic and revisited.

Nevertheless, this research establishes the knowledge on what veterinary clinics in Malaysia need to be improved to increase the customer satisfaction and the loyalty. Further, the results have shown that, the service quality dimensions; empathy, tangible and animal welfare were predicted to give the highest customer loyalty. Therefore, displaying concerns and trying their best to entertain the customer should be done by the veterinary clinic staff to uplift the customer satisfaction and loyalty. Meanwhile, the veterinarians should improve their service towards catering the need of pet owners in treating their pets by identifying, understanding, sharing the feelings of the pet owners and should act upon the necessities of the pet owners. As an example, being understanding and empathetic towards choice of ectoparasitic control, whether it is going to be monthly or yearly, topical or oral application, according to their lifestyle and convenience. In addition, the results showed that veterinary clinic in Malaysia needs to improve service quality dimension in terms of assurance, responsiveness and accessibility. Moreover, in Kuala Lumpur, the population density is high and therefore, inaccessibility of the clinics might be happened due to the heavy traffic congestion and lack of parking space.

5. Conclusions

Customer loyalty is very important to a specialized business such as a veterinary clinic. As such, to ensure customer loyalty clinics are required to increase customer satisfaction. This study has employed the modified SERVQUAL model and shows that empathy was predicted to give the highest customer loyalty to veterinary clinic. This is followed by tangible, animal welfare, accessible, responsiveness and assurance. This study has also indicated that male customers are more loyal than female customers in terms of choosing veterinary clinics. As such in order to get the attention of female customers, being empathic is important since female customers are generally more sensitive. Further, the veterinarians should improve their service towards catering the need of pet owners in treating their pets by identifying, understanding, sharing the feelings of the pet owners and to act upon understanding the need of pet owners. Holding this information, it is recommended that the graduates of veterinary schools need to be equipped with communication skills emphasizing on all the service dimensions, especially being empathic. Improving this area could increase the number of pet owners seeking preventive care from licensed veterinarians.

In the case of a veterinary clinic, it is important to note that the patients are not the customers. Therefore, this study contributes to the existing literature by adding additional variables to the SERQUAL model pertaining to veterinary care. It has shown that apart of the 5-quality dimensions, other variables play a vital role in increasing customer loyalty and customer satisfaction such as being accessible and the animal welfare. Therefore, it is recommended that future studies should focus on the needs of both the customer, and the patient which are the pets.

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