

The Mediating Role of Pharmacy Engagement on the Relationship of Perceived Service Quality, Customer Perception, Price Strategy with Pharmacy Customer Devotion

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ABSTRACT

Owing to burgeoning scope of pharmacy business in Thailand many local and multinational companies have entered the market. These new entrants have caused a turmoil in the dynamics of market. Unhealthy competition is no free reign and new entry has almost been blocked. As a result, it has become very difficult to retain the customers. This study is performed to observe the factors which best enhance the customer devotion and loyalty. The impact of perceived service quality of pharmacy structure, medication price strategies and perception about pharmacists on customer devotion with the mediating role of pharmacy engagement has been studied in the following research. Random sampling technique was used to gather the required data. Data was analyzed through confirmatory factor analysis (CFA) by using PLS software. Additionally, structure equation modeling technique (SEM) was used to test the hypotheses.

The results of the study revealed that there is a positive correlation between perceived service quality of pharmacy structure, pharmacy customer devotion perception and pharmacy engagement. Moreover, pharmacy engagement also strengthens the linkage of pharmacy customer devotion. Meanwhile, pharmacy engagement also mediates the relationship between perceived service quality of pharmacy structure, customer perception about pharmacist and pharmacy customer devotion.

Keywords: Pharmacy Engagement, Perceived Service Quality, Customer Perception, Price Strategy with Pharmacy Customer Devotion

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INTRODUCTION

From the days of yore and in the current era, pharmacy business has been of utmost importance. Likewise in Thailand, the country focused in this study, has this business of value worth more than USD 570 million as per the stats of 2015 having over 15,000 drugstores (Sommanustweechai et al., 2018). Moreover, the growth rate is also noticeable with 15-20% growth-rate per annum. This burgeoning scope and profitability has given rise to very rigorous competition which have a strong impact on the pharmacy business in Thailand (Chan & Ching, 2005). Other impacts, according to this study, include: commodity type drug stores operations, pricing strategies and to some extent, service quality perception. However, as new drug stores are making entrance in the market and introducing new chains competition has been on fire which is ultimately closing many firms and drug stores. Another factor responsible for this factor is the commencement of Association of Southeast Asian Nations (ASEAN) – an economic cooperation in Asian region – have had a noticeable impact on Thailand's pharmacy business and hence, on consumer behavior (Te et al., 2018).

Additionally, this changing market environment has made it important to study behaviorism of the customers which has affected their pharmaceutical products/services engagement. Moreover, in such environment, merely customer satisfaction is not enough to make sure their retention and engagement with the business. Smith (2005), demonstrated in his study that there is no relationship between customer satisfaction and business turnover. Conversely, customer engagement, which would be studied thoroughly in this study, has found to have positive impact on business turnover (Van Doorn et al., 2010).

Although, customer engagement and customer devotion have been studied in a number of past researches owing to the importance of keeping the customers engaged with the business (So et al., 2016; Vivek et al., 2012). However, only a few papers could be found which deal with the impact of these variables on the pharmacy business in Thailand including the impact of medication price strategy, customer perceived service quality of pharmacy structure and pharmacist on customer engagement and customer devotion. For example, in case of pharmacists the paper written by Castaldo et al. (2016), shows that the trust which is built by customers have a great impact on satisfaction, devotion and loyalty in community pharmacies. Antunes et al. (2015), have studied an additional factor that communication and social skills of pharmacists also have an effect on customer devotion to the community pharmacies.

Indeed, rigorous and unhealthy competition has proven to be devastating both for pharmacy companies and Thai society (Chan & Ching, 2005). The irrational pricing strategies has rendered many companies without business and customer base. Another reason is the formation of Association of South East Asian Nations (ASEAN) which has distorted prices and trade practices of many multinational firms. Furthermore, to ensure better survival of pharmacy industry it is impartial to study the variables which can gather new customers and keep the existing customers engaged and devoted within the businesses.

The present study will be focusing on a few such factors which include: service quality perception of the customer of pharmacy structure, medication price strategy – a main cause of large number of closure of drug stores in Thailand and lastly, customer's perception about the pharmacist. The impact of all these variables will be

discussed and analyzed on customer engagement and finally on the customer loyalty and devotion.

Research Objectives

- To analyze the impact of perceived service quality of pharmacy structure on pharmacy customer devotion
- To study the impact of customer perception about pharmacist on pharmacy customer devotion
- To analyze the impact of medication price strategy on pharmacy customer devotion
- To analyze the impact of perceived service quality of pharmacy structure on Pharmacy engagement
- To study the impact of customer perception about pharmacist on their engagement in pharmacy
- To analyze the impact of medication price strategy on pharmacy engagement
- To determine the mediating effect of pharmacy engagement perceived service quality of pharmacy structure, customer perception about pharmacist and medication price strategy on customer devotion in pharmacy.

Significance of the study

According to Shuen (2018), two most important factors to keep the business and its profitability healthy are: making new customers and keeping and retaining the existing customers. Both these factors pose a tough challenge especially in a dynamic environment of Thailand pharmacy business. Although, past researches have shown that retention is more crucial and generates more wealth as compared to making new ones because of low operating costs (Datta et al., 2015). However, existing customers are a source of constant income for the company and also spread positive things about the businesses which markets the products. In fact, to retain such healthy customers it is necessary to make sure they are devoted which means that they are making consecutive and continues purchase, spreading good word about the firm and in the end giving constructive feedback about the product. In addition, Sarkar and Sarkar (2016), have shown that in many varieties of businesses customer devotion plays an important role in long-term business success.

Furthermore, Uncles et al. (2010), found out that there are different types of factors which effect customer devotion and among these factors the one which has been widely accepted and given value in study is customer engagement. This study, will be focusing on customer engagement due to its importance and relevancy in the business environment of Thailand pharmacy market keeping in view other factors mentioned above. Moreover, this study is significant in finding the impact of these factors that ultimately affect the customer devotion in pharmacy business of the country. The community pharmacy business in Thailand has been and currently is burgeoning which has attracted many folks to make huge

sums of investment. But this change in the dynamics of market has backfired, started a turmoil and has spread the air of competition which has proven quite unhealthy for the industry. A number of firms has been closed owing to this and others are surviving in a rigorous environment. In such ambience customer devotion has been proven to be one of the most important variables to ensure the success of business. This study has discussed varies factors which could impact customer devotion and make sure their engagement with the community pharmacy of Thailand.

LITERATURE REVIEW

Thailand's Pharmacy Structure

Pharmacy structure in Thailand is composed of two chunks which are private enterprises and Government enterprises. The Former consists of: local companies which produce generic drugs and distribute mostly within the country and meet the demand of the community pharmacy. Almost 75% of the industry consists of such local companies which include: Biolab, Siam Pharmaceutical, Thai Meiji, Greater Pharma etc. Multinational companies the products of which are mostly imported and original. They operate in Thailand through acquiring a license. Another method they seek is to open an independent new company having its own sales and marketing department. In Thailand a few renowned multinational firms include: Pfizer, Novartis, Sanofi and Merck. On the other hand, Government enterprises include: Defense Pharmaceutical Factory (DPF) which is an operational factory completely controlled by defense industry and energy center, Office of The Permanent Secretary for Defense and Ministry of Defense and Government Pharmaceutical Organization (GPO), a government enterprise, which falls under the authority of Ministry of Public Health (MPH). Hospitals comes under the Ministry of Health which are producing generic drugs with their own premises.

The tasks performed by Defense Pharmaceutical Factory (DPF) include the manufacturing of the pharmaceutical products which are then supplied mostly to the military and government agencies. Should the need arise DPF purchases the products as well. Another important function performed by DPF is to analyze such products as per the set standards. On the other hand Government Pharmaceutical Organization (GPO) continuously does the part of research and development for new medical / pharmaceutical products to meet the needs of public in Thailand (Saramunee et al., 2011).

On the contrary, the market strategy and structure of a few multinational organizations working in Thailand do not invest to form a new company rather they prefer to go in contract with the local firms. An example of such merged strategic organization is Zueling Pharma Thailand. This company is a leading healthcare service provider and have a vast distributing network for pharmaceuticals and medical products. Another strategy employed by Zueling Pharma is the outsourcing of marketing and sales function in their business.

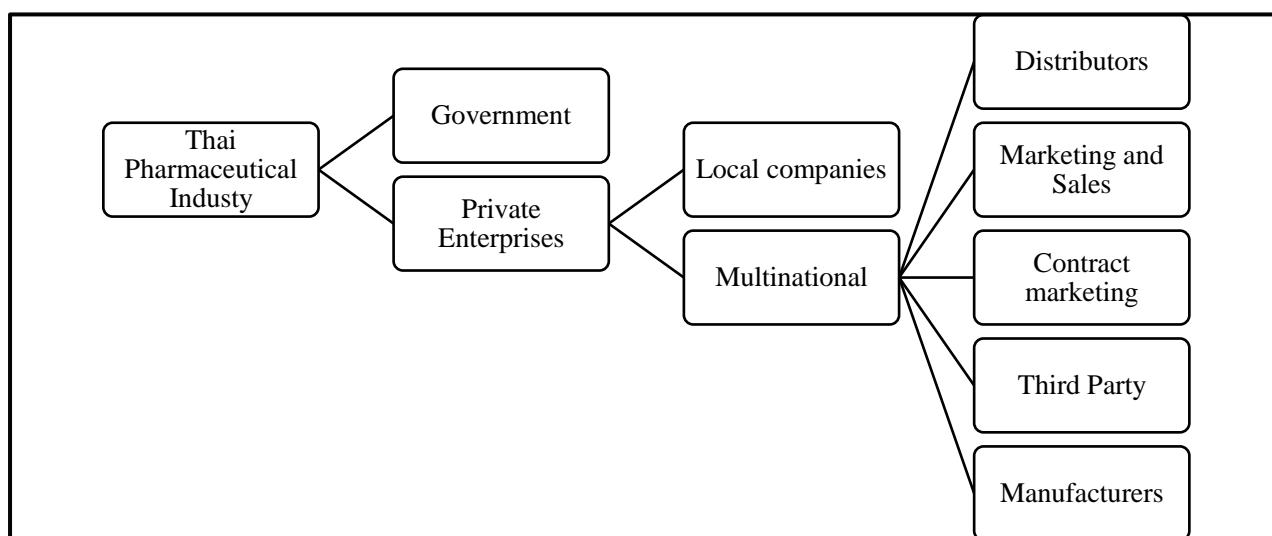


Figure 1. The structure of Pharmaceutical Industry

As per the Drug Act (1967), the pertinent law prevailing in the country, the medicinal products in Thailand has been characterized into two different types which are modern medicines and traditional medicines. Modern medicines are essentially used in latest and hard to cure diseases in contemporary medicinal practices while traditional medicines are those types of drugs which are used in traditional medicine. In community pharmacy these drugs are less controlled and analyzed by the authorities than the modern ones.

According to Pereboom (2001), pharmacists are the professionals who practice in pharmacy, the field of health sciences which deals with safe, effective and efficient use of medication. They are also known by the name of chemists and druggists. The area of knowledge which pharmacists deal with includes: actions of drugs, their uses, therapeutic roles, drug interaction, parameter monitoring, side effects etc. The job of a pharmacist is to convey and interpret this specialized knowledge to the patients, physicians and health care providers. The most common post title given to them is community pharmacist also named as retail pharmacist or first-line pharmacist. Their responsibility is to inculcate the knowledge of medication – usage and precautions – to the concerned persons (Lebovitz & Eddington, 2019).

Perceived Service Quality of Pharmacy Structure

Bharadwaja et al. (2018), suggested that not only the customers but importers are also concerned about the product / service quality. However, in a past few decades, the concept of quality has greatly dipped from the manufacturing sector to the service sector and hence has been given a great deal of importance in strategy formation. Moreover, in the race of being the most efficient many firms have been striving for the betterment of service quality to attain comparative advantage in the market (Ngansathil, 2001). According to Parasuraman et al. (1985), service quality is defined as, “the contact between a customer and the service provider particularly focused on meeting the needs of the customer”. In another study, service quality has been defined as, the assumption made by the service provider

about the perception of the consumer and ultimately the success or failure of actually meeting those expectation. (Zeithaml et al., 1990).

Moreover, with the passage of time, pharmacy customers are becoming more and more quality conscious and resultantly the firms are focusing more on the quality of their products and services. In fact, to attain the confidence of Thai community the concerned pharma companies are striving to attain the Certificate of Analysis (COA). This certificate has been set as a basic prerequisite by the Ministry of Public Health, Thailand (Ploylearmsang et al., 2019). The most important dimensions, which were also studied by Wirtz and Lovelock (2016), include the tangible ones i.e. having a physical form, the one which can be relied upon: performance, promptness i.e. helpfulness, competence: secure and credible, and empathy i.e. communicative and fathomable.

Medication Price Strategy

As stated by Levinthal (2018), strategy can be defined as the art and science of mounting and utilizing all the resources of a firm available to attain highest possible profits over a long time period ensuring the survival of the company. The strategy of a firm affects all of its pertinent functions and embodies the vision of the organization. Same is the case with the medication pricing strategy which is an essential part of a firm’s long-term policy. In accordance with the essence of vision of a company, pricing strategy must also be practical and pragmatic. Medication pricing strategy includes the cost of the service or product provided to the customer keeping in view their expectations and desires as mentioned above (Nitadpakorn et al., 2017). It wouldn’t be wrong to say that in marketing the concept most often discussed, utilized and applied is the marketing mix which consists of four elements: people, promotion, place and price.

When any multinational firm, local firm or merger between the two is to be formed the biggest challenge faced by them in Thai community pharmacy – as has been mentioned above – is the upcoming competition formed on the basis of medication pricing strategies. The issue

with such dynamic environment is that not a single firm can set a price which is too high or too low because it would either cause you a hefty loss or in worst case scenario the said firm would collapse as has been the fate of many pharmacies in Thailand (Parivudhipongs, 2018). A pricing strategy considers different prevailing segments of the customers and current environment. The strategy deals with ability to pay, competitors, their line of action, cost of input etc. and gives you an ideal price at which the product or service ought to be provided to the customers (Levinthal, 2018).

Customer Perception about Pharmacist

According to Miller and Johnson-Laird (1976), perception can be defined as the process of choosing, sorting and interpreting the sensations which have been gathered by sensory organs. The scientific study of perception hence deals with what we make of these raw sensations and how human mind gives meaning to it and ultimately takes decisions. Each individual has the capacity to interpret this knowledge or sensation according to his/her distinct needs and past experiences (Regan, 2000). The basic process of perception can be shown in the following figure.



As stated by Sharma et al. (2011), customers set an expectation from the organization and its services and then according to those views they perceive about that organization's performance. Likewise, in case of pharmacy community, customer perception has been explained when customers feels engaged with specific pharmacies they will surely give positive feedback, try to come again to that pharmacy and encourage people for purchasing medicines from that pharmacy (Nitadpakorn et al., 2017). Briefly, perceptions and expectations can be described as desires or wants of a customer. In the end, from the lens of a customer's perception, it is more about what 'should be' instead of what 'would be'. As a result, with each day passing, it is becoming necessary for the organizations to measure and analyze customer's perceptions and their desires (Miranda et al., 2018) and ultimately mitigate the gap between this perception and what they have to offer.

Pharmacy Engagement

The concept of 'engagement' has widely been used in past to study organizational commitment and citizenship behavior to forecast the financial performance of the company (Saks, 2006; Ghani, Kaliappen, & Jermsittiparsert, 2019). In literature, engagement has been explained as "task behavior which strengthens the linkage to perform the job and relationship among the personnel" (Schaufeli & Salanova, 2007). The stimulus which has motivated the researchers to study the concept of engagement has been the various positive outcomes which can be seen at both individual as well as organizational levels. With this inertia, employee engagement has been studied to have positive impact on intention, behavior and attitude of the personnel (Saks, 2006).

Furthermore, it has been positively linked with job satisfaction and extraordinary organizational performance (Salanova et al., 2005). But, most importantly, from the last few decades, customer engagement has gained a lot of attention in marketing. This concept is deemed important due to its impact on consumer devotion. Moreover, customer engagement has been one of the highly used variable in past researches (Brodie et al., 2011; Verhoef et al., 2010). Specifically in the domains of retail marketing, strategic marketing and relationship marketing it has been given a lot of

prominence. Customer engagement can be defined as "expression of the customers' expectations in their attitude toward the services or products provided by an organization, other than buying, which is the outcome of motivational drivers." (Vivek et al., 2012).

Gillis et al. (2018), has asserted in a slightly different literature as "the extent of the involvement of a customer in relation with what the firm is offering and its activities, which are commenced by either the individual or the firm itself." However, in community pharmacy customer engagement, Castaldo et al. (2016), shows that customer's trust have a great impact on satisfaction, devotion and loyalty. Additionally, Nitadpakorn et al. (2017) argued that retaining existing customers in pharmacy business is costly as compare to new customer generation. As existing customers are a great source of creating trust among new customers more quickly. Customer engagement in pharmacy has actually played the most pivotal role in retaining customers.

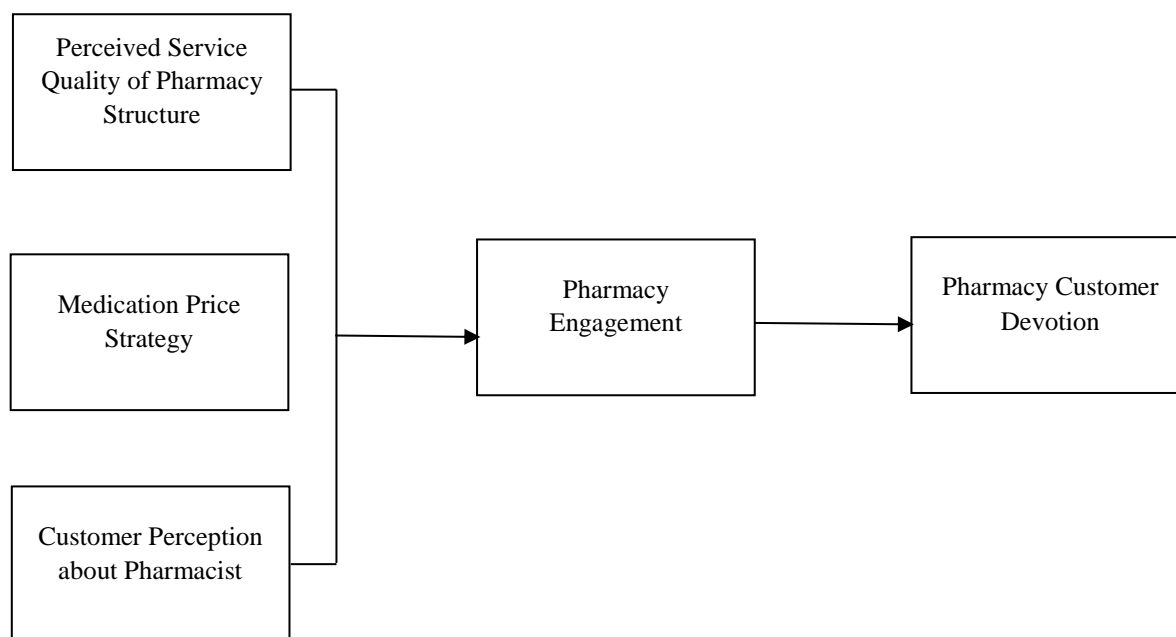
Pharmacy Customer Devotion

According to Nitadpakorn et al. (2017), devotion is something which a buyer depicts in his/her behavior when buying a product or service from an organization. Customer devotion is quite different concept in a sense that it shows the attribute of the people rather than something which is embodied in the product or service given by the brands. Customer devotion, sometimes referred as customer loyalty, can be defined as the attitude or behavior which results in a strong relationship with the services offered by the firm (Budianto, 2019). Pharmacy customer devotion is also conveyed through some expressive behaviors i.e. purchase patterns of past. However, business owners have an axiom that getting a customer in pharmacy is rather easy than keeping the existing customer. This saying interprets the dynamic environment which is also the case of community pharmacy in Thailand as discussed before. To ensure customers' devotion, many tactics have been employed by the business owners. Yang et al. (2018), have found that more than 90% businesses have set their first priority to give the best customer experience. Carranza et al. (2018), has given a few reasons why customer devotion is so important. Firstly, there is word of mouth. Marketing done through word of mouth is authentic and all the more viable in this era. Human psychology is to

trust the words of the person he/she trusts personally. Hence, when the customers are devoted they spread positive word of mouth which in the long run generate more customers. Secondly, loyal customers stick with you through thick and thin and are devoted and loyal. When the times are hard for the firm they stay and even when mistakes are made such folks gives you the benefit doubt and stay loyal to the business. Thirdly, frequent

purchases ensue and a higher form of devotion is established as customer buys the product just to support the company rather than fulfilling his/ her needs. Lastly, the feedback of devoted customers act as company's focus group and gives constructive feedback about the new and existing products (Budianto, 2019).

Theoretical Framework



Keeping in mind the above literature following hypotheses have been deduced for this current study,

H1: Perceived service quality of pharmacy structure has significant positive effect on pharmacy customer devotion

H2: Medication price strategy has significant positive effect on pharmacy customer devotion

H3: Customer perception about pharmacist has significant positive impact on pharmacy customer devotion

H4: Perceived service quality of pharmacy structure has significant positive effect on pharmacy engagement

H5: Medication price strategy has significant positive effect on pharmacy engagement

H6: Customer perception about pharmacist has significant positive impact on pharmacy engagement

H7: Pharmacy engagement has significant positive effect on pharmacy customer devotion

H8: Pharmacy engagement mediates the relationship between perceived service quality of pharmacy structure and pharmacy customer devotion

H9: Pharmacy engagement mediates the relationship between medication price strategy and pharmacy customer devotion

H10: Pharmacy engagement mediates the relationship between customer perception about pharmacist and pharmacy customer devotion

METHODOLOGY

Design and Sample

The results were gathered from community pharmacy customers. Out of total 300 questionnaires 265 were returned back and 11 out of these were excluded due to missing and vague values and markings. Demographic profile demonstrated that the male percentage of respondents was 55.2 while the remaining were female i.e. 44.8. Regarding the age group, 49 percent of the respondents were of the age group of 25-45 while others were above 45 including a few senior citizens (15%). Moreover, 90% of the respondents were literate.

Measures

All the items under this study were taken from the previous research of Nitadpakorn et al. (2017). Five-point Likert scales were chosen to measure the items present in the questionnaire ranking from strongly disagree to strongly agree (1 to 5). Firstly, to measure 'Perceived Quality of Pharmacy Structure' (PQPS), scale of three items was used. A sample item is: 'Perceived quality pharmacy structure look clean, has enough light and look professional'. Moreover, in order to measure 'Medication price strategy' (Price) three items were utilized. Sample item is: 'Pharmacy has a comparatively lower prices of medicines as compared to others'.

Thirdly, to measure Customer's 'Perception about Pharmacist' (PAP) a scale with five items was used. One sample of those items included: 'The pharmacist at the pharmacy provide the customer with acute knowledge and dependable service'. Pharmacy Engagement (PE), was

measured by choosing a scale comprising of total nice items. Sample item articulate as: 'I don't want to visit other pharmacies when I'm receiving the services at the pharmacy I regularly visits'. Lastly, to measure 'Pharmacy

Customer Devotion' (PCD), five items were used including: 'I encourage friends and relatives to engage with the pharmacy I regularly visits.'

RESULTS

Table 1. Convergent Validity

Constructs	Items	Loadings	CR	AVE
Perceived Service Quality of Pharmacy Structure	PQPS1	0.861	0.899	0.749
	PQPS2	0.873		
	PQPS3	0.861		
Medication Price Strategy	PR1	0.896	0.943	0.847
	PR2	0.939		
	PR3	0.925		
Customer Perception about Pharmacist	PAP1	0.865	0.913	0.678
	PAP2	0.869		
	PAP3	0.794		
	PAP4	0.717		
	PAP5	0.862		
Pharmacy Engagement	PE1	0.820	0.933	0.640
	PE2	0.762		
	PE3	0.893		
	PE4	0.732		
	PE5	0.644		
	PE6	0.710		
	PE7	0.873		
	PE8	0.921		
Pharmacy Customer Devotion	PCD1	0.784	0.864	0.560
	PCD2	0.792		
	PCD3	0.800		
	PCD4	0.668		
	PCD5	0.686		

As the items loading high (> 0.50) on their variables the validity of the 'measurement scale' will be considered as "convergent". Moreover, the items in table 1 can be observed to have the value between 0.590 to 0.852 and

AVE value for all variables is more than 0.50 with CR value exceeding the figure of 0.8, it can be deducted that 'convergent validity' of all the variables has been established.

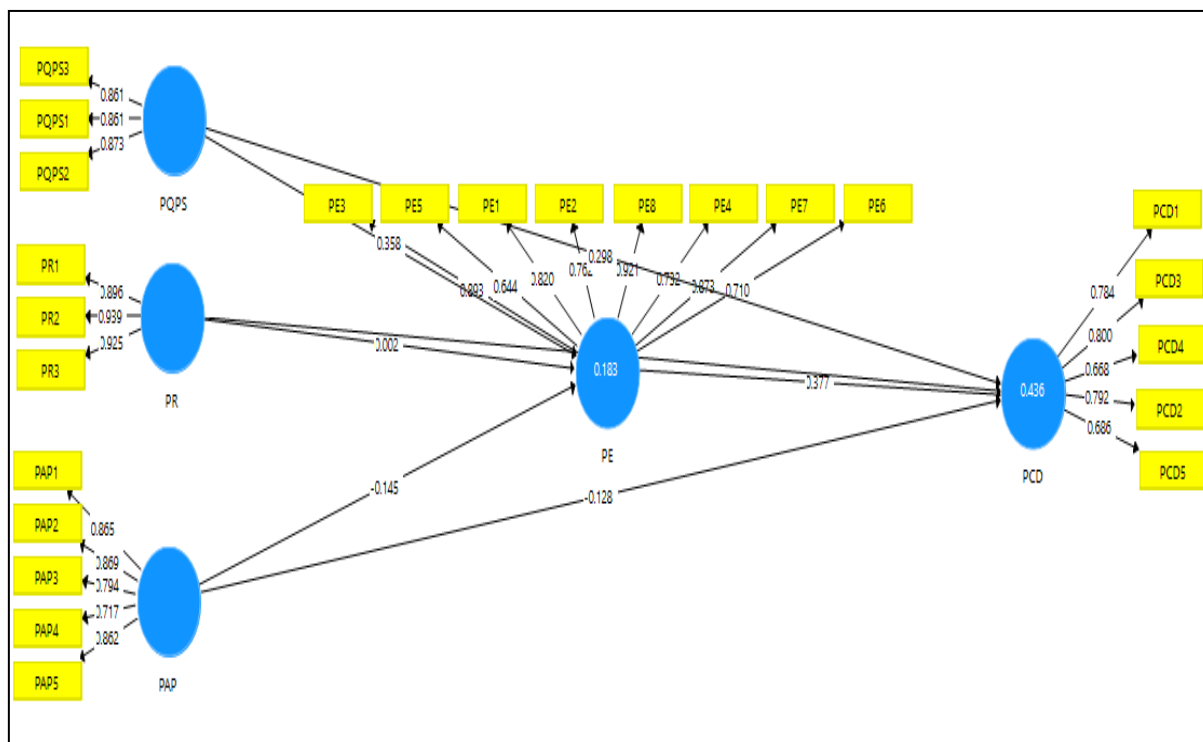


Figure 2. Measurement Model Assessment

Table 2. HTMT ratio

	PAP	PCD	PE	PQPS	PR
PAP					
PCD	0.387				
PE	0.277	0.619			
PQPS	0.360	0.639	0.454		
PR	0.200	0.430	0.267	0.711	

Table 2 delineate the HTMT-Ratio with which we assess the 'discriminant validity'. When the value of "Heterotrait-Monotrait ratio" is less than 0.90 it can be

said that discriminant validity has been established and as per the reading of our study all values are less than 0.90.

Table 3. Path Analysis

	Main Effects	Std. Beta	Std. Error	T Value	P Values	LL	U.L	Decision
H1	PQPS -> PCD	0.298	0.071	4.203	0.000	0.172	0.407	Supported
H2	PR -> PCD	0.073	0.055	1.318	0.094	-0.020	0.163	Not Supported
H3	PAP -> PCD	-0.128	0.061	2.105	0.018	-0.237	-0.036	Not Supported
H4	PQPS -> PE	0.358	0.059	6.026	0.000	0.262	0.456	Supported
H5	PR -> PE	0.002	0.061	0.029	0.488	-0.100	0.103	Not Supported
H6	PAP -> PE	-0.145	0.062	2.328	0.010	-0.251	-0.042	Not Supported
H7	PE -> PCD	0.377	0.051	7.324	0.000	0.297	0.465	Supported

Findings showed that Perceived Quality of Pharmacy Structure (PQPS) has positive impact on Pharmacy Customer Devotion (PCD) which supported the H1 hypothesis ($\beta = 0.298$, $t = 4.203$). Conversely, hypothesis 2 wasn't supported by the results ($\beta = 0.073$, $t = 1.318$). This shows that there is no significant relation between medication pricing strategy (PR) and Pharmacy Customer

Devotion (PCD). Similarly, H3 is also not supported which reveals that significant negative relationship exists among perception about pharmacist and pharmacy customer devotion ($\beta = -0.128$, $t = 2.105$).

Moreover, H4 anticipated the significant effect of Perceived Quality of Pharmacy Structure (PQPS) on Pharmacy Engagement and the result expressed the

positive relation of PQPS on PE ($\beta = 0.358, t = 6.026$). Hence, fourth hypothesis was supported by the findings. However, H5 i.e. relationship between pricing (PR) and Pharmacy Engagement (PE) wasn't supported as the findings depicted insignificant association among them ($\beta = 0.002, t = 0.029$). Likewise, Hypothesis 6 results articulated that Perception about pharmacist (PAP) has

negative effect on Pharmacy Engagement (PE). $\beta = -0.145, t = 2.328$ and so results does not supported the hypothesis. Furthermore, H7 reveals that Pharmacy Engagement (PE) significantly and positively influence Pharmacy Customer Devotion (PCD), that supported the results ($\beta = 0.377, t = 7.324$).

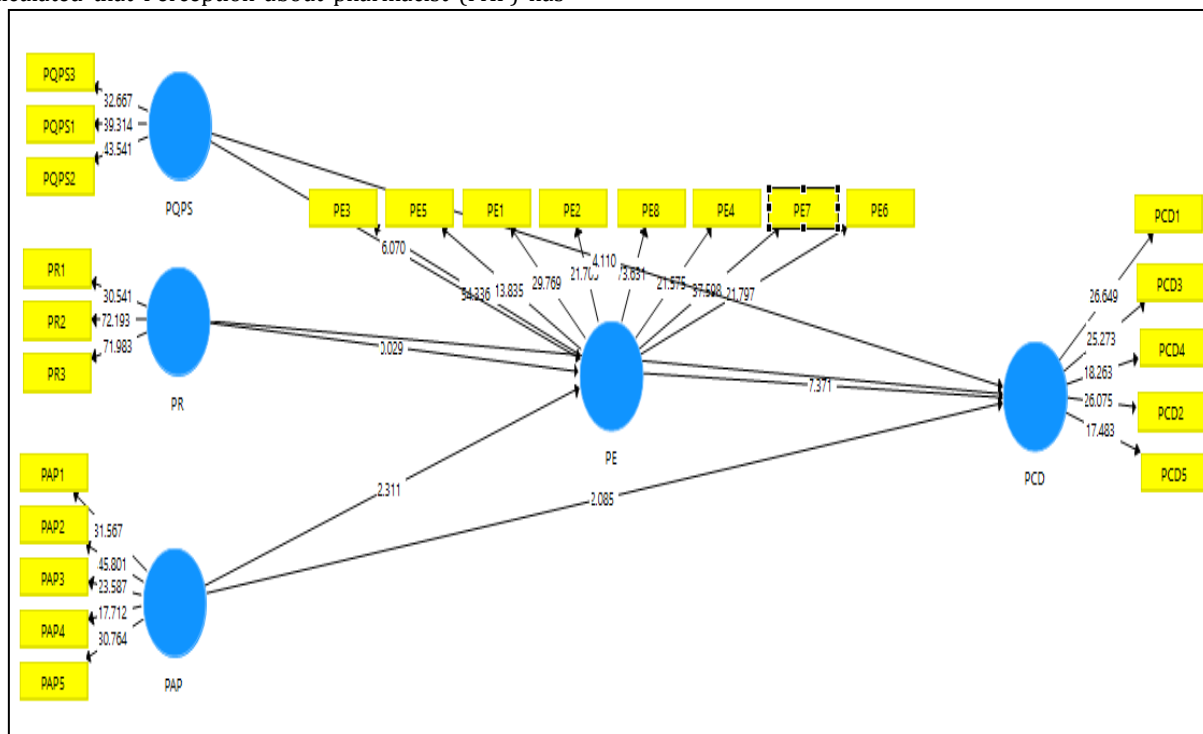


Figure 3. Structural Model Assessment

Table 4. Indirect Effect

	Indirect Effects	Std. Beta	Std. Error	T Value	P Values	L.L	U.L	Decision
H8	PQPS->PE->PCD	0.135	0.028	4.817	0.000	0.094	0.185	Supported
H9	PR -> PE -> PCD	0.001	0.023	0.028	0.489	-0.039	0.038	Not Supported
H10	PAP-> PE -> PCD	-0.055	0.027	2.006	0.022	-0.104	-0.014	Supported

Table 4 delineate the mediating role of Pharmacy Engagement (PE). The "bootstrapping analysis" illustrated in this table shows that H8 and H10 were significant with t-value of 4.817, 2.006 and P values of 0.000, 0.022 respectively. In addition, the third mediating effect H9 wasn't supported with t-value of 0.028 and P value of 0.489. The indirect effect employing '0' between lower limit (L.L) and upper limit (U.L) is considered to be not supported.

DISCUSSION AND CONCLUSION

The findings of the study show that pharmacy customer devotion (PCD) is increased by the perceived service quality of pharmacy structure (PQPS) while vice versa in case of perception about pharmacist (PAP). The results enlightened us that when a customer has a better PQPS which is being provided in the pharmacy structure of Thailand he/she becomes more devoted and loyal. Furthermore, the study of mediating role of Pharmacy Engagement (PE) showed that PE strengthens this relation and customer becomes more devoted and is more likely to stay loyal with the company. Secondly, the

relation between medication price strategies (PR) was studied and the results showed no noticeable link between the two neither pharmacy customer devotion had any impact nor the pharmacy engagement in this linkage. Finally, the findings elucidated that customers' perception about the pharmacist does not plays role in pharmacy customer devotion. But the linkage was found to be fortified by the mediating effect of pharmacy engagement. The community pharmacy in Thailand should more focus on engaging the customers with the business by giving better service quality in current pharmacy structure and hire, employ or train better pharmacists to keep the customers from finding substitutes.

There are various limitations in the study. Firstly, the study was conducted in Thailand. It can be expanded geographically. Secondly, the sample size could be increased to get more accurate results. Thirdly, only pharma industry was brought under study. Other industries involving retail could be studied and the impact of customer perception about the service quality or product quality can be studied. Correspondingly, the

mediating effect of pharmacy engagement was studied in further studies any different mediator could be selected like governmental policies or political environment of the country.

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