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Investigating the antecedents of Potential Hypertension Patients' Brand Loyalty and Brand Equity in Personal Health Assistant Services: A Case Study on a Private Hospital in Bangkok, Thailand

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Abstract

Purpose: The research has aim to investigate the factors that significantly impact brand loyalty and brand equity in personal health assistant services perceived by patients with potential hypertension at a private hospital of Bangkok, Thailand. **Research design, data and methodology:** The research framework was conceptualized based on previous studies and theoretical frameworks, which consisted of perceived service quality, satisfaction, word-of-mouth, brand image, brand loyalty, and brand equity. The research has conducted the study with a group of 500 respondents with potential hypertension patients using purposive sampling, stratified random sampling, and convenience sampling. Questionnaires for data collection were verified for reliability of measurement items with Item-Objective Congruence (IOC) and pilot test. The collected data was then analyzed with Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). **Results:** Brand image is an antecedent of both brand loyalty and brand equity, in which brand image was significantly impacted from word-of-mouth. Although perceived service quality impacted satisfaction, satisfaction has no significant relationship to brand loyalty. **Conclusions:** Brand marketers and service providers should focus on stimulating positive word-of-mouth and shaping brand image through service promotion and advertisement in order to create brand loyalty and brand equity in personal health assistance service.

Keywords: Brand Loyalty, Brand Image, Brand Equity, Hypertension, Health Assistant Services

JEL Classification Code: I10, L86, M10, O30

1. Introduction

Thailand is currently facing an aging society. Thai citizens aged above 60 years old has contribute largely to the total share of population comparing with other countries in ASEAN. The ageing society of Thailand is also projected to grow larger than the United States and Europe by 2045. This drives future needs for healthcare services in the years ahead (Thailand Board of Investment, n.d.). Nevertheless, there are limitation of health care service accessibility and non-medical cost related to health services, especially for those elderly living in rural area, old aged, and bedridden patients such as transportation and accommodation costs both for patients and care givers, and time availability of care givers (World Bank, 2016). Thence, digital health tool is an option to remotely monitor and manage patients care. Personal health assistance service is an innovative approach of healthcare virtual assistant (HVA) that engage patients

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through digital platform or digital devices for health interactions and monitoring to enhance patient outcomes at lower cost AMA Digital Health Study, 2020). HVA delivers more effective patient support and critical care updates through the integration of key clinical care information delivery and symptom tracking. Thailand foresees the development needs on health care system that several strategies were regulated to enhance the quality, efficiency, and security of health care services such as Thailand 4.0 strategy and eHealth strategy. These will consequently add long-term value of health care services (Ministry of Public Health, 2017).

This research has focused the study of personal health assistant services on hypertension. Possibility of having hypertension increases with age, which may imply that Thais with hypertension can be greatly intensify as ageing society grows (NHS, 2019). Rates of Thai citizens with hypertension has increased from 21% in 2003 to 25% in 2014, and the prevalence of hypertension patients' gender and their living in urban and rural areas were comparable. Hypertension is treatable and preventable, so consistent monitoring and clinical care are crucial to lower the risk (World Health Organization [WHO], 2019). Although the disease can be prevented through healthier lifestyle, it is also known as the "silent killer" where the symptom is not known until at critical stage. Therefore, elderly who are at risk or has potential hypertension would require close monitoring on health conditions. By utilizing HVA for hypertension monitoring, it can help achieve the flexibility of medical appointment and communication, improve accuracy of health diagnosis and treatment from accessibility of health records, and improve patient's discipline on treatment (Ruiz-Fernández et al., 2017).

The literature study on HVA service, especially in the scope of hypertension by age generation group is still limited. This gap has limited the understanding on what are the factors or countermeasures for patients to utilize this innovative mechanism of personal health assistant services. Therefore, to promote the usage, value and sustainability this personal health assistant services, the factors of consumer-based brand equity, the related brand assets and associations are studied with different age generation group.

This research has aim to investigate the factors significantly impact brand loyalty and brand equity in personal health assistant services. The factors studied are brand assets associated with brand equity in accordance to Aaker (1991), Keller (1993), and Lassar et al. (1995), namely brand loyalty, brand image, perceived quality, trustworthiness, as well as factors contributing to brand assets of satisfaction and word-of-mouth. The analysis was conducted with represent potential hypertension patients of a private hospital in Bangkok, Thailand. This private hospital was chosen for the case study as the hospital leads in innovative patient services and medical technology. The hospital has been recognized for their efforts in quality, innovation, and excellence in healthcare and medicine through the accreditation and awards. The research findings would benefit brand marketers and health assistant service providers in building brands that are beneficial and valuable to the potential hypertension patients.

2. Literature Review

Enhancing brand equity has been a key strategic goal for organization that attempts to offer superior values (Keller, 1993). Innovation is one of a drivers for enhance brand value through differentiation, proposition and revitalize the brand (Sriram et al., 2007). To build patients' brand equity with the innovation of personal health assistant services, a set of assets associated with brand equity and other factors related were studies. The factors comprise of brand loyalty, brand image, perceived quality, satisfaction, and word-of-mouth (Aaker, 1991; Keller, 1993; Lassar et al., 1995).

2.1 Perceived Service Quality

Continuous improvement of service quality can assist businesses in attracting new customers, as well as retaining the existing one (Zeithaml & Bitner, 1996). According to Hamer (2006), perceived service quality comprises of expectation, perceived performance, and disconfirmation. Expectation is the threshold of service level that customers used for comparison with actual service performance (Zeithaml et al., 1993). Perceived performance is the customer's subjective assessment of the service received and disconfirmation is the association between expectations and perceived performance (Parasuraman et al., 1985). In healthcare, Donabedian (1980) has defined the perceived quality as the patients' assessment on the interpersonal relationship between patients and doctors, technical competence in diagnosis and treatment, and the amenities of the healthcare facilities. The achievement of these service dimensions can further leads to customer satisfaction (Fatima et al., 2018; Gonçalves et al., 2020). Patients are satisfied when the service or assistance received has met their needs and perceived expectations. Ampaw et al. (2020), Boakye et al. (2017), and Hussain et al. (2019) have also posited the positive relationship between perceived service quality and satisfaction in healthcare sector. Therefore, the researcher has proposed hypothesis as follow:

H1: Perceived service quality significantly impacts satisfaction.

2.2 Satisfaction

When the customer is impressed with the product or service, it is called satisfaction. It is a positive opinion of an individual regarding to particular situation or experience that resolved their anticipation (Shemwell et al., 1998). Satisfaction is the pleasantness or displeasure that customers feel after comparing the experienced from using the product or service and their expected performance (Kotler, 2003). The study of Dayan et al. (2022) and Gonçalves et al. (2020) has highlighted the significance of satisfaction as a mediating role between perceive service quality and loyalty. Satisfaction determined the decision making of customers for future purchase, from the results of service performance perceived by customers (De Keyser et al., 2020; Do & Vu, 2020). Satisfaction is one of the significant factors that forms customer loyalty as accumulated satisfactory experience can convert to repeated purchase, service rendering, or so-called customer loyalty (Kotler et al., 2017). The positive attitude toward the healthcare service technology can turns to patient satisfaction and patient loyalty (Zhou et al., 2017). Therefore, the researcher has proposed hypothesis as follow:
H2: Satisfaction significantly impacts brand loyalty.

2.3 Word-of-mouth

The behavior of consumer spreading information on the product, brand, service, or firm to other consumers is called word-of-mouth (Rosario et al., 2016). Word-of-mouth is a type of social influence that indicates the individual communication and feedback on the medical product, service, or brand to his or her friends, family and social circles, where could be favorable, neutral, or unfavorable (Kotler, 2006). Word-of-mouth has the influencing power, as the consumer perceived this informal communication as neutral, credible and less biased (Herr et al., 1991). It can significantly induce the consumers perception on brand image, that can consequently lead to brand equity or purchase intention (Bambauer-Sachse & Mangold, 2011; Jalilvand & Samiei, 2012). The significance of relationship between word-of-mouth and brand image was also found in the study of Cham et al. (2016). Cham et al. (2021) also found significance of word-of-mouth communication on hospital brand image, which can further develop loyalty. Therefore, the researcher has proposed hypothesis as follow:
H3: Word-of-mouth significantly impacts brand image.

2.4 Brand Image

The overall impression that customers had in the mind regarding product or service brand defines brand image (Keller, 1993). Kotler and Keller (2012) have mentioned that brand image is rooted from the belief, experience, attitude, and perception that the customers have toward the brand. It is a subjective perception of consumers based on their direct or indirect post-experience impression and feeling toward the brand (Cho & Fiore, 2015). Marketing brands are crucial for service firms as it can help customers to conceptualize the services, its value, and differentiation from competitors, which ultimately leads to customers' trust, lessen purchase risk and decisive decision marking (Khodadad Hosseini & Behboudi, 2017).

Studies by Chahal and Bala (2012) and Wang et al. (2013) have indicated that past experience of patients that contributes to brand image crucially influence their decision in selecting clinical service in the future. Dayan et al. (2022) has also signified the impact of brand image over long-term brand preference or brand loyalty of patients. Meanwhile, Altaf et al. (2018) and Yasin et al. (2007) found that the positive belief of patients on the service can directly influence their tendency in choosing and behavioral response on brand equity. Supported by the study of Chahal and Bala (2012) that brand image influences service brand equity in the healthcare. Therefore, the researcher has proposed hypothesis as follow:
H4: Brand image significantly impacts brand loyalty.
H5: Brand image significantly impacts brand equity.

2.5 Brand Loyalty

Brand loyalty is the customers' attachment to the brand, so it is a critical factor for service firms to earned in order to sustain long-term relationship with the customers (Aaker, 1991). Brand loyalty described by Oliver (1997) is not limited to repetitive purchase of the brand, it also includes the preference and willingness to suggest the brands to other consumers in their circles. Amine (1998) stated that long-term sustainability and success of an organization depends on customer loyalty which also resulting to brand equity. The cumulative loyalty gained from customers create brand equity (Das & Mukherjee, 2016). Brand loyalty is said to be the core dimension of brand equity (Chahal & Bala, 2012). Similarly to the study of Shekhar Kumar et al. (2013) that found significance of brand loyalty towards brand equity. Therefore, the researcher has proposed hypothesis as follow:
H6: Brand loyalty significantly impacts brand equity.

2.6 Brand Equity

Wang et al. (2009) has conceptualized brand equity in healthcare industry as the aspects of service brand perceived by patients. While Aaker (1991) stated that brand equity consists of a series of brand assets such as brand awareness, brand loyalty, perceived loyalty, brand association, and other proprietary assets. According to Kotler and Pfoertsch (2007), brand equity is the customers' distinctive perception towards

the brand when experiencing its product or service. Keller (1993) has depicted that brand equity mainly consist of two dimensions, brand image and brand awareness. It is the brand response and brand knowledge that the customers have. When customers are familiarized and have favorable perception towards the brand, they tend to have positive brand associations and greater brand equity. A strong brand equity can help assist brand extension strategies of the company, build high barriers to entry and securing marketing share from competitors (Farquhar, 1989).

3. Research Methods and Materials

3.1 Research Framework

The conceptual framework illustrated in figure 1 was formulated to explain the determinants of brand loyalty and brand equity in personal health assistant services for hypertension patients. The association of variables in the conceptual framework were determined from three previous studies by Gonçalves et al. (2020) that studied loyalty in healthcare, Cham et al. (2021) that studied the behavioral intention of medical tourism, and Chahal and Bala (2012) that studied factors influencing brand equity in healthcare. The conceptual framework composing of six variables, namely, perceived service quality, satisfaction, word-of-mouth, brand image, brand loyalty, and brand equity.

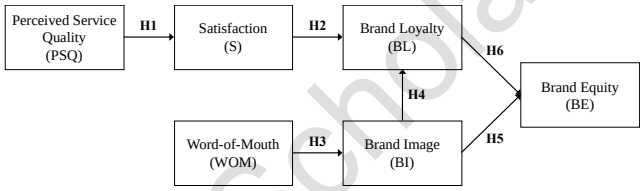

Figure 1: Research Framework

3.2 Methodology

In order to achieve the research objective, the research used quantitative approach for data collection and analysis. Target respondents for the study were patients with potential hypertension symptoms and the researcher has applied both probability and nonprobability sampling techniques to scope the respondents. Questionnaire was selected as a survey tool to collect data from target respondents via offline paper-based and online electronic form. Questionnaire consists of three parts, screening questions, variable measurement, and demographic questions. Screen questions were designed to filter respondents to the target group for the study and variable measurement items were designed for respondents to rate the statements. Measurement items were adopted from previous studies in which its reliability has been tested from Item-Objective Congruence (IOC) with three experts and pilot test with 50 respondents. The rating has used five-point Likert scale from strongly disagree (1) to strongly agree (5) to measure each variable item (Likert, 1932). Lastly, demographic questions were designed to collect the characteristics of the respondents. Data collected was then analyzed using SPSS version 14.0 and AMOS version 6.0 to run statistical calculation from confirmatory factor analysis to test construct validity of measurement model, and structural equation model (SEM) to test fitness and casual relationship of structural model.

3.3 Target Population and Sample Size

The population for this study is targeted on patients of a private hospital who are having potential hypertension symptoms and age at 40 years old and above. Potential hypertension patients in this context are those patients who consistently have blood pressure at or within the range of 120/80 mmHg to 139/89 mmHg. Also, the researcher has targeted patients age at 40 years old and above as chance of having hypertension increases with age (NHS, 2019). Target respondents were further group into four generations of Generation Y (40-49 years-old), Generation X (50-59 years-old), Baby Boomer (60-69 years-old), and Senior Citizen (70 years-old and above) for representation of research findings.

The sample size for data collection was determine using A-priori Sample Size Calculator for Structural Equation Models from danielsoper's website (Soper, 2023). The recommended sample size was at 403 based on the calculation criteria of 6 latent variables and 27 observed variables with a probability level of 0.05. The researcher has collected 500 valid data sets to exceed the recommendation.

3.4 Sampling Procedure

Techniques of both probability and non-probability sampling were used to obtain data from target respondents. First method of sampling was purposive sampling where the researcher has selected target group of a private hospital's patients with potential hypertension symptom and are at the age of 40 years old and above. Second method of sampling was stratified random sampling. The sample size of 500 data sets was proportionately allocated among four age groups or four generations, which are Generation Y (40-49 years-old), Generation X (50-59 years-old), Baby Boomer (60-69 years-old), and Senior Citizen (70 years-old and above). The allocation of sample size is presented in table 1. Third method of sampling was convenience sampling. The questionnaire distribution of both offline copies and online via MS forms were took place at the targeted private hospital. The data was collected only from those respondents who are available and willing to participate in the survey at the time of distribution.

Table 1: Sample Size of Patients by Generations

Generation	Patients with Potential Hypertension	Proportion Percentage	Sample Size
Gen Y	2,641	49	247
Gen X	1,856	35	174
Baby Boomer	658	12	62
Senior Citizen	189	4	18
Total	5,344	**100**	**500**

Source: Constructed by Author (Based on the data obtained from BH)

4. Results and Discussion

4.1 Demographic Information

From total 500 data sets, the demographic characteristics of potential hypertension patients are illustrated in table 2. Respondents were male at 49.2 percent (246) and female at 50.8 percent (254), and were Thai at 77.8 percent (389) and Non-Thai at 22.2 percent (111). Respondents were aged between 40-49 years old at 49.4 percent (247), 50-59 years at 34.8 percent (174), 60-69 years old at 12.4 percent (62), and 70 years-old and up at 3.6 percent (18).

Table 2: Demographic Information

Demographic and Behavior Data (N=500)		Frequency	Percentage
Gender	Male	246	49.2
	Female	254	50.8
Nationality	Thai	389	77.8
	Non-Thai	111	22.2
Age	40-49 Years-old	247	49.4
	50-59 Years-old	174	34.8
	60-69 Years-old	62	12.4
	70 Years-old and up	18	3.6

4.2 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis or CFA is a statistical technique used for data analysis in this research. CFA help evaluates convergent validity, discriminant validity, and fitness of measurement model (Jöreskog, 1969). Convergent validity was evaluated from measuring composite reliability (CR), Cronbach's alpha reliability (CA), factor loadings, and average variances extracted (AVE). A reasonable value of each measurement to testified convergent validity was value greater than 0.6 for CR (Hair et al., 2018), CA, 0.6 for CA (Hulin et al., 2001), 0.5 for factor loading and 0.4 for AVE (Fornell & Larcker, 1981). The results of evaluating convergent validity with CFA are presented in table 3.

On discriminant validity presented in table 3, it evaluates using the comparison of square root AVE with the inter-construct correlations (Fornell & Larcker, 1981). Discriminant validity was testified from the larger value of square root AVE with all other factor correlations.

Table 3: Confirmatory Factor Analysis (CFA), Composite Reliability (CR), and Average Variance Extracted (AVE) Results

Variable	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factor Loading	CR	AVE
Perceived service quality (PSQ)	Gonçalves et al. (2020)	4	0.835	0.657 – 0.829	0.836	0.562
Satisfaction (S)	Gonçalves et al. (2020) and Dayan et al. (2022)	5	0.809	0.656 – 0.700	0.810	0.460
Word-of-mouth (WOM)	Cham et al. (2021)	5	0.789	0.613 – 0.702	0.791	0.432
Brand image (BI)	Cham et al. (2021) and Chahal and Bala (2012)	5	0.796	0.624 – 0.709	0.798	0.442
Brand loyalty (BL)	Chahal and Bala (2012)	4	0.830	0.708 – 0.771	0.831	0.552
Brand equity (BE)	Altaf et al. (2018)	4	0.828	0.658 – 0.810	0.828	0.548

Note: CR = Composite Reliability, AVE = Average Variance Extracted

Table 4: Discriminant Validity

Variable	Factor Correlations					
	PSQ	S	WOM	BI	BL	BE
PSQ	**0.750**					
S	0.212	**0.679**				
WOM	0.138	0.512	**0.657**			
BI	0.186	0.519	0.582	**0.665**		
BL	0.106	0.149	0.253	0.413	**0.743**	
BE	0.154	0.416	0.550	0.501	0.328	**0.740**

Note: The diagonally listed value is the AVE square roots of the variables

4.3 Structural Equation Model (SEM)

Structural equation model is a statistical technique to assess the structural model fitness and its strength of relationship between variables. Goodness-of-fit indices were means of measuring structural model fitness. Seven indices were used for measurement and the statistical values are require to exceed the criterion to confirm model fitness. The model was adjusted for model fitness, and the statistical values of adjusted model were CMIN/df = 1.642; GFI = 0.931; AGFI = 0.915; NFI = 0.902; CFI = 0.959; TLI = 0.953; RMSEA = 0.036 as demonstrated in table 5.

Table 5: Goodness of Fit for Structural Model

Index	Criterion	Statistical Value after Model Adjustment
CMIN/DF	< 3.00 (Hair et al., 2006)	1.642
GFI	≥ 0.90 (Hair et al., 2006)	0.931
AGFI	≥ 0.90 (Hair et al., 2006)	0.915
NFI	≥ 0.90 (Arbuckle, 1995)	0.902

Index	Criterion	Statistical Value after Model Adjustment
CFI	≥ 0.90 (Hair et al., 2006)	0.959
TLI	≥ 0.90 (Hair et al., 2006)	0.953
RMSEA	< 0.05 (Browne & Cudeck, 1993)	0.036

Note: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, CFI = comparative fit index, TLI = Tucker Lewis index and RMSEA = root mean square error of approximation

4.4 Research Hypothesis Testing Result

The strength of relationship between variables is measured by regression coefficients or standardized path coefficients at p-value<0.05. Table 6 and figure 2 have demonstrated the results of hypothesis testing. The results have highlighted that the antecedent of brand loyalty and brand equity was brand image, and brand image was driven by word-of-mouth.

Table 6: Hypothesis Testing Result

Hypothesis		Standardized path coefficients (β)	t-value	Test Result
H1	PSQ → S	0.162	3.119*	Supported
H2	S → BL	-0.106	-1.843	Not Supported
H3	WOM → BI	0.508	7.692*	Supported
H4	BI → BL	0.441	6.623*	Supported
H5	BI → BE	0.505	7.422*	Supported
H6	BL → BE	0.094	1.743	Not Supported

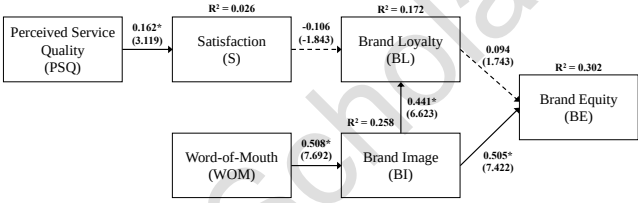

Figure 2: Revised Research Framework
Note: Solid line reported the Standardized Coefficient with *p<0.05, and t-value in Parentheses; Dash line (H2 and H6) reported not significant.

The presentation of table 6 and figure 2 are summarized as the following.

H1: Perceived service quality significantly impact satisfaction from standardized path coefficients at 0.162 and t-value at 3.119. This has proven the findings of Ampaw et al. (2020), Fatima et al. (2018) and Hussain et al. (2019) that when patients has received qualified services that met or beyond their expectation such as technical competence in diagnosis and treatment and functionality of HVA, they tend to be satisfied with the service.

H2: Satisfaction does not significantly impact brand loyalty from standardized path coefficients at -0.106 and t-value at -1.843. This contradicted with the studies by Dayan et al. (2022) and Zhou et al. (2017) that satisfaction does not subsequently lead to continual behavior or loyalty in the service.

H3: Word-of-mouth significantly impact brand image from standardized path coefficients at 0.508 and t-value at 7.692. This has attested the significance of social influence that can induce the perception of other consumers regarding the service and branding. The finding is aligned with studies conducted by Cham et al. (2016) and Cham et al. (2021).

H4: Brand image significantly impact brand loyalty from standardized path coefficients at 0.441 and t-value at 6.623. Positive image of the service perceived by patients would impact their decision in selecting the same service provider in the future. This agrees with Chahal and Bala (2012) and Dayan et al. (2022) that highlighted the significant and direct relationship of both variables.

H5: Brand image significantly impact on brand equity from standardized path coefficients at 0.505 and t-value at 7.422. As found by Altaf et al. (2018) and Chahal and Bala (2012), brand image portrays the favorable impression that patients have towards the service and brand, in which causes of their belief and experience. Hence, it creates brand value and equity.

H6: Brand loyalty does not significantly impact brand equity from standardized path coefficients at 0.094 and t-value at 1.743. This finding opposed the studies of Das and Mukherjee (2016) and Shekhar Kumar et al. (2013). Equity in branding of personal health assistance is not rooted from the commitment or loyalty of the service.

5. Conclusions

5.1 Conclusions

This research was conducted to investigate the factors significantly impact brand loyalty and brand equity in personal health assistant service among potential hypertension patients. Previous studies and theoretical frameworks were literate to develop conceptual framework that composing of six variables, perceived service quality, satisfaction, word-of-mouth, brand image, brand loyalty, and brand equity. Questionnaires was developed for to collect data from target respondents of a private hospital's patients who are having potential hypertension symptoms and age at 40 years old and above. The questionnaire was tested for reliability with IOC and pilot test before actual distribution of 500 data sets. The collected data was analyzed using CFA and SEM to validate reliability of variables, model fitness, and casual impact of variables for hypothesis testing. The analysis showed that four out of six hypotheses were supported with empirical data. The antecedent of brand loyalty and brand equity was brand image, and brand image was driven by word-of-mouth.

Although perceived service quality impacts satisfaction, satisfaction has no significant influence on brand loyalty. Brand loyalty also has no significant impact on brand equity. Brand equity was solely impacted from brand image.

The finding confirms theory of Aaker (1991) that have highlighted the significance of consumers' cognitive aspect and brand assets on branding in healthcare industry, which are brand image, brand loyalty, and brand equity. The finding also corresponds with the statement from Riezebos (2003) that social influence is an important aspect of marketing that can help shaped brand positioning, reputation and image in the mind of consumers and gain competitive advantage. The insignificance of satisfaction on brand loyalty could be that patients are unconvinced is service commitment solely from their direct experience. As the targeted patients are in elevated or pre-hypertension level, satisfaction based on direct experience may not be sufficient for patients to trigger or start monitoring their health conditions. Patients may need indirect experience, recommendation from other consumers, and favorable image of branding to help convince on the importance and effectiveness before deciding to continue the service for health monitoring. Therefore, the factors that should be emphasized in order to build or enhance brand loyalty and brand equity are word-of-mouth and brand image.

5.2 Recommendation

Brand loyalty and brand equity was directly impacted from brand image, and indirectly impacted from word-of-mouth. These two factors of brand image and word-of-mouth should be focused by brand marketers and health assistant service providers to build brand values and service commitment.

Word-of-mouth can be neutral, positive or even negative and it has a direct relationship with brand image. Strategies to be implemented should ensure positive result for positive image. Word-of-mouth tends to be induced from epic experience that customers have received, which could derive from efficient service process or service assistance beyond their expectation. Therefore, the quality, efficiency, and effectiveness of service should be well ensured for favorable experience. In addition, brand marketers and health assistant service providers should then encourage or proactively ask for customers' feedback, review and ratings to understand their expectations and areas for improvement. Channels for customer review could be on the department's or hospitals' website and other social media for wider audience group. Also, it is important for brand marketers and health assistant service providers to responses to those feedback and review to demonstrate the responsiveness and that the problem has been yet resolved in order to retain and attract customers.

As brand image composes of brand positioning and reputation, customers' feedback in channels with wide group of audience would help build brand image, but despite that brand marketers and health assistant service providers can also contributes to own brand image. The patient and medical services and branding should be promoted to raise awareness on the service and its benefits. Promotion activities can also be embedded to gain customer engagement and trial to the service. The communication materials such as posters and leaflets and advertisement through social media can used for visibility not only to the target patients but also to their caregivers.

5.3 Limitation and Further Study

The research can further be extended to elaborate findings or gaining insights from different perspective. This finding has showed that word-of-mouth was a crucial indicator of brand assets, brand image, brand loyalty, and brand equity. Therefore, factors that determine word-of-mouth can be further studied to elaborate ways to build positive word-of-mouth. Qualitative research approach could also be utilized to collect quality responses and gain different insights. In addition, this research was conducted with a private hospital in Bangkok, Thailand, therefore the scope of research could be extended to other types of healthcare facilities and geographical region.

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