

## ARTICLE

# Brand equity analysis to increase health care utilization

Ernawaty Ernawaty,<sup>1,3</sup> Kendra Wardhani K,<sup>2</sup> Stefanus Supriyanto,<sup>1</sup> Nuzulul Kusuma Putri,<sup>1,3</sup> Yeni Rahmah Husniyawati<sup>4</sup>

<sup>1</sup>Departement of Health Policy and Administration; <sup>2</sup>Health Care Center, Universitas Airlangga; <sup>3</sup>Harapan Keluarga Hospital, Mataram; <sup>4</sup>Master Program in Health Policy and Administration, Faculty of Public Health, Universitas Airlangga, Indonesia

## Abstract

**Background:** Health care utilization is one of the key indicators in measuring performance of health care services. Strong brand equity suggests positive correlation with great attraction for consumers to use a product.

**Design and Methods:** A cross-sectional study was conducted to identify the effects of brand equity to health care utilization. 381 students were selected by simple random sampling. Multiple logistic regression tests were used to analyze the influence between variables.

**Results:** Findings showed that there was an influence between brand equity and health care utilization ( $P=0.001$ ). In the three attributes, brand equity was known to have an influence to the utilization of health care. The highest influence of the three attributes was brand association ( $\text{Exp (B)} = 2.501$ ).

**Conclusions:** It can be concluded that brand equity affects patient visits to AHCC showing that the brand equity significantly influence patient visits. Promotion to create familiarity and good impression was required to enhance brand equity and increase health care utilization.

## Introduction

Working together with the National Health Insurance, it is expected that Primary Health Care (PHC) would improve the quality of health in the communities.<sup>1,2</sup> As the first health service provider, PHCs work continuously to increase health status and provide the best health service to the community.<sup>3</sup> Airlangga Health Care Center (AHCC) is one of the primary clinics under the auspices of Universitas Airlangga. The main functions of AHCC are to provide and promote health care to the community. We did a mini survey and found that 36.5% of students have never utilized the health services provided by the AHCC. The main reasons for not visiting AHCC include: no history of illness (51.7%), distant location (12.8%), uncertainty about services (12.8%), difficult administration (9.7%) and fear of treatment (3.2%).

According to the survey, AHCC is not considered as the main option when seeking treatment because it is not attractive, even though most students did know about its existence.

AHCC should have a good management strategy to attract students' interest and create a positive brand for the health services offered. According to Kotler and Keller, since service is intangible, customers often make decisions in places far from their real locations.<sup>4</sup> Hence, brand memorability is very important. Brand is the core of sales and marketing activities that can increase customer awareness and loyalty towards the company.<sup>5</sup> The brand embodies both tangible and intangible qualities of a service, and creates value that influences how the organization functions and how it is perceived internally by the organizational workforce and externally by the customers.<sup>6</sup> Strong brand equity indicates strong product appeal for customers. Brand equity, as a set of brand assets and liabilities associated with brand, name and symbol, could increase or decrease the value offered in terms of goods and services from the company to its customers.<sup>7</sup> It consists of several components: brand awareness, brand loyalty, brand association, perceived quality, and other brand assets.<sup>8</sup>

Brand awareness is the perceptive-level understanding about the attributes of a brand and the level of importance to the customers.<sup>9</sup> Brand association includes the thoughts, feelings, perceptions, impressions, experiences, beliefs and behaviors related to the brand for a customer, and it is associated with the customer's conception about a brand.<sup>10,11</sup> Brand loyalty is the affection or loyalty of customers to a brand.<sup>12,13</sup>

The purpose of this study is to identify the effects of brand equity to health care utilization. The three attributes of brand equity examined included brand awareness, brand association, and brand loyalty.<sup>8</sup>

## Design and Methods

A cross-sectional study was conducted to identify the effects of brand equity to health care utilization. 381 students were selected by simple random sampling. Multiple logistic regression tests

### Significance for public health

*In a study reports on the utilization of University health care center it was found that more than one-third (36.5%) of students have never used the service. One of the reasons contributing to the suboptimal utilization of health care services was the brand factor. Components of brand equity include brand awareness, brand association, and brand loyalty. The highest influence of the three attributes is brand association. Promotion to create familiarity and good impression is required to enhance brand equity and increase the University health care utilization. This paper describes the influence of brand equity to University health care utilization.*

were used to analyze the influence between variables. Data was collected by interview using questionnaires. Validity and reliability testing were done on the questionnaires. This study passed the ethical review number 053/HRECCFODMI/II/2019.

## Results and Discussion

Based on the research on 381 students of Universitas Airlangga, there were 217 students who had visited AHCC while they were enrolled students and 164 students who had never been to AHCC while they were enrolled students. Students who had been to AHCC were asked to provide an assessment of brand equity (brand awareness, brand loyalty, and brand association). Meanwhile, the students who have never visited AHCC were asked to provide an assessment of brand equity (brand awareness, brand loyalty, and brand association) of the preferred PHC from where the students obtain health services.

The results of the data collection are showed in Table 1. The overall brand equity of AHCC was found to be in the good category (3.37), while the brand equity of the preferred PHC besides AHCC was also found to the good category with a lower index (3.18) related to AHCC's brand equity. Evaluation on sub-variables showed that brand awareness, brand association, and brand loyalty of AHCC had higher values than the other PHCs where students seek treatment.

The research considered the visits done at AHCC throughout

the year before the research was conducted, with the earliest date of visit is January 1<sup>st</sup>, 2017. Overview of patient visits to AHCC is shown in Table 2, which shows that the majority of the students (52.0%) had visited the Healthcare Center of Universitas Airlangga, Surabaya, to obtain health services.

## The effects of brand equity on patient visits to the Healthcare Center of Universitas Airlangga, Surabaya

The statistical test used to identify the effect of brand equity on patient visits to AHCC was a multiple logistic regression test using the "Backword Likelihood Ratio" method. The influence of brand equity (brand awareness, brand loyalty, and brand association) on patient visits to AHCC can be seen in Table 3. The results of statistical tests of brand equity to patient visits to AHCC suggested that brand equity significantly influenced the patient visits. The most influencing attribute of brand equity on patient visits to AHCC was brand awareness, with an influence coefficient of 2,060, whereas the least influencing attribute was brand loyalty with a coefficient of influence of 0.671.

Those findings showed that brand equity influenced patient visits. Good brand equity might increase the number of visits to AHCC, and it has a specific value for the company and customers.<sup>14,15</sup> For the customers, brand equity has some values involving interpretation and confidence in purchasing or using the services offered, including health services. The quality of services is what customer feels.<sup>16</sup>

The results showed that brand awareness influenced patient

**Table 1. Universitas Airlangga Healthcare Center brand equity by the students of Universitas Airlangga in 2018.**

Attribute number	Brand Equity Attribute Description	The visit to Healthcare Center of Universitas Airlangga			
		Previous visits to Healthcare Center (n=217)		No visit to Healthcare Center (n=164)	
		Assessment Mean	Composite Mean	Assessment Mean	Composite Mean
<b>A. Brand Awareness</b>					
1	Knowledge about type of service	3.78	3.89	3.31	3.65
2	The choice of PHC to seek treatment	4.00	(Good)	4.00	(Good)
<b>B. Brand Association</b>					
1	The clarity of the name board	3.39	3.46	3.11	3.17
2	The ease to reach location	3.63	(Good)	3.35	(Good)
3	The satisfaction over provided services	3.35		3.06	
<b>C. Brand Loyalty</b>					
1	Telling a good experience	2.84	2.77	2.66	2.71
2	Inviting other people to use	3.00	(Fair)	2.96	(Fair)
3	Being loyal to PHC	2.28		2.44	
4	Having an intention to use it again	2.88		2.80	
5	Commitment	2.88		2.70	
<b>Mean of the brand equity</b>			3.37 (Good)		3.18 (Good)

**Table 2. Students visits as patients to Healthcare Center of Universitas Airlangga during 2018.**

No	Patient visit to Healthcare Center of Universitas Airlangga	Frequency (n)	Percentage (%)
1	No visit	183	48.0
2	Previous visit	198	52.0
Total	381	100.0	

**Table 3. The effect of brand equity towards patient visits to Universitas Airlangga Healthcare Center.**

Variable Independent Variable	Dependent Variable	P	Exp (B)	B	Explanation
Brand Awareness	Patient Visit	0.001	2.060	0.723	Significant
Brand Association	to Healthcare	0.001	2.501	0.917	Significant
Brand Loyalty	Center of Universitas	0.001	0.671	-0.339	Significant
Brand Equity	Airlangga	0.001	1.205	0.186	Significant

visits to AHCC, so good brand awareness might increase the number of visits to AHCC. This study was in line with a previous study conducted by Evans, Blitstein, Vallone, *et al.*, showing which showed that there was a strong relationship between brand awareness and the decision to utilize a lactation clinic at a hospital.<sup>17</sup> The indicator of brand awareness is the level of knowledge about the goods or services offered (brand knowledge). Brand knowledge is the result of customer's knowledge about the brand, which is what customers learn, feel, see and hear about the brand because of their experiences. According to Keller, brand knowledge plays a key role in creating brand equity.<sup>18</sup> If the company can build a strong brand in customers' mind with an effective strategy, then the brand will have an additional value for customers, in the form of brand awareness.<sup>19</sup> Conversely, a study conducted by Sumarni showed that brand awareness does not have a strong impact on the re-utilization of health services in hospitals.<sup>20</sup> This is because most of the respondents do not know the brand and logo of the hospital very well.

Brand association influenced patient visits to AHCC. The results of this study were supported by Sumarmi study stating that brand association had an effect on the interest to re-utilize the services in the inpatient care of hospital.<sup>20</sup> The results of the study were also supported by the study by Evans, Blitstein, Vallone, *et al.* showing that there was a strong correlation between brand association and the decision to utilize the lactation clinic at the hospital.<sup>17</sup> Customers will tend to use brands that are considered as a good brand by the public, have a high quality, reliable, and so on. Brands that have good associations from community's point of view will usually be easily accepted.

Beside brand awareness and brand association, the other attribute of brand equity influencing the number of visits to AHCC was brand loyalty. Differently from the results of other studies in general, this study revealed that good brand loyalty could reduce number of visits to AHCC: that was because based on the descriptive results, the loyalty to AHCC was lower than those to the other health facilities, indicating a need to increase customer's loyalty to the Healthcare Center.

## Conclusions

It can be concluded that brand equity affects patient visits to AHCC, because it significantly influences patient visits. Promotion to create familiarity and good impression is required to enhance brand equity and increase health care utilization. University Healthcare Center should increase the effort to create brand awareness, provide good services to increase brand association, maintain and increase brand loyalty by enhancing interactions with patients, making direct contact with patients continuously and measuring patients' satisfaction periodically.

**Correspondence:** Ernawaty Ernawaty, Department of Health Policy and Administration, Faculty of Public Health, Universitas Airlangga, Jl. Mulyorejo, Surabaya, Jawa Timur 60115, Indonesia.  
Tel.: +62315920948 - Fax: +62315924618  
E-mail: ernawatyfkm@gmail.com.

**Key words:** Brand Association; Brand Awareness; Brand Equity; Brand Loyalty; Utilization.

**Contributions:** The authors contributed equally, SS, NKP, YRH has been co-facilitator of the study. KWK has managed this study.

**Conflict of interest:** The authors declare no conflict of interest.

**Funding:** This study was supported by Healthcare Centre, Universitas Airlangga.

**Acknowledgments:** We would like to thank to all staff in Healthcare Centre, Universitas Airlangga for their friendly support.

**Clinical trials:** The study did not involve any clinical trial.

**Conference presentation:** Part of this paper was presented at the 4<sup>th</sup> International Symposium of Public Health, 2019 October 29-31, Griffith University, Gold Coast, Australia.

Received for publication: 6 March 2020.

Accepted for publication: 13 June 2020.

©Copyright: the Author(s), 2020

Licensee PAGEPress, Italy

Journal of Public Health Research 2020;9:1821

doi:10.4081/jphr.2020.1281

This work is licensed under a Creative Commons Attribution NonCommercial 4.0 License (CC BY-NC 4.0).

## References

- Liang C, Mei J, Liang Y, et al. The Effects of Gatekeeping on The Quality of Primary Care in Guangdong Province, China: A Cross-Sectional Study Using Primary Care Assessment Tool-Audit Edition. *BMC Family Practice* 2019;20:1-12.
- Nshimirimana DA, Mwaura-Tenambergen W, Kokonya D, et al. Attitudes of Primary Health Care (PHC) Gatekeepers Towards Patient Referral Policy, Machakos County, Kenya. *Sc J Pub Health* 2016;4:284-8.
- Mosadeghrad AM. Factors Influencing Healthcare Service Quality. *Int J Health Policy Manag* 2014;3:77-89.
- Kotler P, Keller KL. *Marketing Management*. 15th ed. Harlow: Pearson Education Limited; 2016.
- Chierici R, Del Bosco B, Mazzucchelli A, et al. Enhancing

- Brand Awareness, Reputation and Loyalty: The Role of Social Media. *IJBM* 2019;14:216-28.
6. Wheeler A. *Designing Brand Identity: A Complete Guide to Creating, Building and Maintaining Strong Brands*. 2nd ed. Philadelphia: Wiley; 2006.
  7. Poerwadi S, Suyanto M, Hidayat A, et al. Influence of Brand Extension Strategy, Brand Image and Brand Trust on Coffee Product's Brand Equity. *IJMS* 2019;11:26-35.
  8. Aaker, D. *Managing Brand Equity Capitalizing on the Value of a Brand Name*. New York: The Free Press; 1991.
  9. Karam AA, Saydam S. An Analysis Study of Improving Brand Awareness and Its Impact on Customer Behavior Via Media in North Cyprus (A Case Study of Fast Food Restaurants). *IJBSS* 2015;6:66-80.
  10. Lee GC, Leh FCY. Customer-Based Brand Equity: A Literature Review. *Intl Ref Res J* 2011;11:33-42.
  11. Wijaya BS. Dimensions of Brand Image: A Conceptual Review from The Perspective of Brand Communication. *EJBM* 2013;5:55-65.
  12. Dust HV, Askarzade GR. The Relationship Between Customer Loyalty And Product Brands, *IJRSS* 2013;3:95-104.
  13. Ong CH, Lee HW, Ramayah T. Impact of Brand Experience on Loyalty. *J Hospit Market Manag* 2018;27:1-17.
  14. Jeon J-E. The Impact of Brand Concept on Brand Equity. *Asia Pacific J Innovat Entrepreneur* 2017;11:233-45.
  15. Pongiannan K, Chinnasamy J. Relationship Between Brand Equity and Customer Retention-A Descriptive Study With Two-Wheeler Brands. *POSEIDON J Comm* 2014;3:35-43.
  16. Gronroos, C. *Service Management and Marketing: A Customer Relationship Management Approach*. Chichester: John Wiley & Sons, Ltd; 2005.
  17. Evans WD, Blitstein J, et al. Systematic Review of Health Branding: Growth of A Promising Practice. *Transl Behav Med* 2015;5:24-36.
  18. Keller KL. *Strategic Brand Management: Building, Measuring and Managing Brand Equity*. New Jersey: Prentice Hall; 2003.
  19. Latif WB, Islam MdA, MdNoor I. Building Brand Awareness in The Modern Marketing Environment: A Conceptual Model. *IJBT* 2014; 4:69-82.
  20. Sumarni S. Pengaruh Brand Equity Terhadap Minat Pemanfaatan Kembali Pelayanan pada Instalasi Rawat Inap Rumah Sakit Ibnu Sina Makassar. *Indonesian J Hospital Administration* 2018;1:1-11.