

THE EFFECT OF SERVICESCAPE DIMENSION ON PATIENT SATISFACTION IN PRIVATE HOSPITAL IN PURWOKERTO, CENTRAL JAVA

Dandy Dharma¹, Wiwiek R Adawiyah¹, Eman Sutrisna²

¹Faculty of Economy and Business, Jendral Soedirman University, Purwokerto, Central Java,
Indonesia

Abstract : The Growth of Hospital in the world is making a rapid progress, in Indonesia there are about 2800 hospital that is active. The high demand made hospital to always improved their quality service. All Health care provider need to understand what the patient and his or her family feel about the health care provider. Servicescape or physical environment of an organization in creating a service experience can be used to measure the condition of the health care provider environment. Dimension of servicescape include tangible, reliability, responsiveness, assurance, and empathy. A couple of previous research show there is a significant relationship between servicescape and the high recommendation to the health care provider. This Study aim to learn the effect of servicescape with patient satisfaction in private hospital. This study is a observational cross sectional with the inclusion all patient in Budi Asih Hospital Purwokerto that agree or consent to the research and exclusion is patient with mental illness or reject to be part of the research. The method to gather the sample is non probability sampling with consecutive sampling because of the limited subject and time of research. The instrument to gather the data is using Bittner servicescape dimension questionnaire that is modified. Data will be process using multiple regression, F test and T test. The main result of the study is there is a significant with R 0,526 between all the servicescape dimension as whole and patient satisfaction. But in the servicescape dimension especially in the ambient condition the sig only 0,521 and t count is 0,0649 which indicated that there is no significant effect of servicescape to patient satisfaction. Further studies is needed to focused more in the psychological response to the physical environment from other perspective.

Keyword : Servicescape, Health Care, Hospital, Physical Dimension, Patient satisfaction

¹ Responding Author email: dandydharma92@gmail.com

1. INTRODUCTION

The healthcare service in Indonesia mainly in the hospital service is very competitive. There are about 2800 hospitals that are recognized by the Ministry of Health in Indonesia and the number are predicted still growing. The growth of hospital service in Indonesia are assumed strongly related between cost and service quality that they give, thus is going to increase the expectation of the patient about service quality. Advanced technology, easier access to health information through the internet and holistic approach are demanded in this era [9]. The increase in competition in healthcare service with the increase in consumerism of patients is really important for healthcare service to understand what the patient feels in that healthcare service that they are using. Healthcare service condition is very dynamic because the service quality that the patient received can have a contribution about how service and evaluation for the service quality are received, this also is influenced by the health workers, mood and maintaining good relations between patient and worker.

Healthcare service providers already identified the importance of servicescape or physical environment in an organization in creating a service experience for the patient and family. Healthcare providers are taking and adapting hospitality services from hotels and restaurants [7]. The dimension of servicescape is also perceived as the physical environment that a human can control or manipulate the natural environment [3]. Zeithaml stated that physical environment is a tangible sign that is related to service quality starting from the physical aspect of the service provider, for example the exterior, interior and others. Holder's research stated that the effect of servicescape change and the perception of service quality in the maternal unit with an experimental method have a significant result. Servicescape change is not significant in all dimensions if just observing it with the eyes, but in statistics is very significant in tangibility, reliability and responsiveness [10].

From the patient satisfaction side, a hospital with a patient-centered concept is important because this hospital is developing its services based on patient opinion. Other research is suggesting using SERVQUAL to measure consumer perception about quality service, but with years passing by the research involving servicescape using Bittner's servicescape dimension is already noticeable. This study is focusing on patient satisfaction in a private hospital from the patient's point of view.

2. LITERATURE REVIEW

2.1. Servicescape

Servicescape dimension is also known as physical environment around human that the human can control or manipulated the natural environment [3]. Zeithaml stated that physical environment also know as tangible sign that are related to the service quality from all physical aspect of the service provider. The dimension using in this study is bittner 3 dimension from ambient condition, spatial layout functionality and sign, symbol, artifacts.

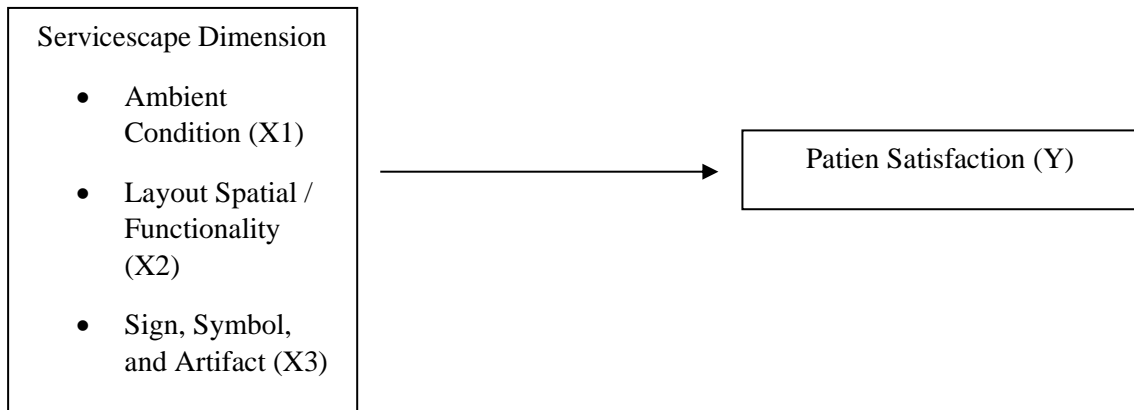
Ambient condition can be clarified as a intangible background characteristic that can stimulate the perceptory of human, in other words can influenced the perception and respond of patient of the physical environment through visual, cleanliness, ambient and audio [3, 11]. All of that factor can create a mood about how patient behaved [23, 24] and can make the patient appreciated and enjoyed the servicescape [27].

Spatial layout/functionality can be defined as a settings between object like furniture, machine, or equipment in the service area that a patient need [1, 3, 14]. Sui stated that a design layout like easy acces to the healthcare provider facility will contributed to the patient willingly to comeback to the healthcare provider [31]. Arrifin stated functionality is a used for an object or item to facilitated the need of the patient, a study with a result of interior that are attractive can increased the perception of costumer to a service provider [2-3].

Sign, symbol, and artifact

In general all three of this factor can be categorized as a explicit and implicit sign that can directly influenced customer from the way they communicated and can show image and rule of an organization [3]. Sui stated that sign, symbol, artifact can described servicescape as a whole, creating positive image of an organization, influenced the need of customer and increased service quality [31]. Organization created symbol to make an aesthetic impression to help the customer and understanding instruction of an organization [34].

2.2. Theoretical Framework



H1 : There is a significant relationship between ambient condition and patient satisfaction at a private hospital in Purwokerto

H2 : There is a significant relationship between layout spatial/functionality and patient satisfaction at a private hospital in Purwokerto

H3 : There is a significant relationship between sign, symbol, artifact and patient satisfaction at a private hospital in Purwokerto

3. METHODOLOGY

The method of the gathering sample is a non probability sampling with consecutive sampling because of the limited subject and time of the research. The total subject for this study is 40 sample, the subject of the sample is all patient in the private hospital of RSIA Budhi Asih Purwokerto with the age range starting from 17 years above, women and men, agree to the research without forced. The exclusion of the research is patient that have a mental disability or other disease, injury that can effect the mind of the patient, patient declined to participate in the research. The instrument using to gather the data is using bittner servicescape dimension that are modified and already tested in the validity and reality. The data will be process using multiple Regression, F test and T test.

4. DISCUSSION

Table 4.1 Demographic

Demographic Info		frequency	percent	valid percent	cummulative percent
Gender	Men	6	15	15	15
	Women	34	85	85	100
	total	40	100	100	
Age	17 - 24 years	12	30	30	30
	25 - 34 years	15	37.5	37.5	67.5
	35 -49 years	13	32.5	32.5	
	total	40	100	100	100
Education	Elementary School	4	10	10	10
	Middle School	10	25	25	35
	High School	18	45	45	80
	diploma	2	5	5	85
	Bachelor	5	12.5	12.5	97.5
	Magister	1	2.5	2.5	100
	total	40	100	100	
Long of stay	< 3 days	28	70	70	70
	3 - 6 days	12	30	30	100
	total	40	100	100	
Job	government	3	7.5	7.5	7.5
	private	7	17.5	17.5	25
	laborer	2	5	5	30
	merchant	6	15	15	45
	not working	19	47.5	47.5	92.5
	others	3	7.5	7.5	100
	total	40	100	100	

The complete table demographic profile of respondent is presented at table 4.1, the identification of respondent profile may lead to understanding to whom we should targeted. A questionnaire were distributed to 40 patient based on sample calculation in RSIA Budhi Asih.

Overall. The sample comprised both females and males, however, the survey were dominated by female 85% (N=34), the imbalance figure between gender because the RSIA Budhi Asih is focusly or specializing in obstetrical, but have a emergency room and have a general practitioner to treat all gender.

Age is almost no significant difference between age, range 25 -34 with 37.5% is more dominated because of the hospital specialization in obstetrical and local culture or lifestyle to married and have children at that range age.

In education and Job the dominated result is highschool 45% and not working 47.5% this is based on more female sample and hospital specialization in obstetrical which lure more female patient, and based on culture the men are the backbone of the familly not the female.

Long of stay less than 3 day is 70% because the time to heal when giving birth a child it is about that range days.

Table 4.2 Multiple Regresion Summary

Summary Multiple Regression Analysis				
Variable		Cregresion Coefisient	T Count	Sig.
constanta		10,549		
Ambient condition (X1)		0,085	0,0649	0,521
Layout Spatial / Functionality (X2)		0,575	2,956	0,005
Sign, Symbol, Artifact (X3)		0,396	3,148	0,03
F Count	13,34			0,000
R square	0,526			

From table 4.2 R square result is 0,526 which means variable ambient condition (X1), layout spatial/functionality (X2), and sign, symbol, artifact (X3) have a contribution about 52,6% to variable patien satisfaction (Y), meanwhile the rest 47,4% is influenced by external or other factor from this regresion equitation or variable that or not study.

Sig. value is 0,000 because of the value is less than 0,05 the conclusion of the F test is the Hipotesis of the study is accepted or in othe words, servicescape dimension : ambient condition (X1), layout spatial (X2) and sign, symbol, artifact (X3) have an effect to the patient satisfaction (Y). based on the F count table is 13,340, because the F count is more than the F table 2,84 the hipotesis is accepted too.

Based on table 4.2 the sig. value of ambient condition (X1) is 0,521, because the sig. value is more than the probabilitation value 0,05 we can make a conclusion Hipotesis 1 is denied therefore Ambient condition don't have an effect to patient satisfaction. Same goes with T test where t count of variable X1 is 0,649 less than 2,028 (T table) so H1 is denied. From lovelock, physical enviroment or ambient condition defined as enviroment characteristic that the human can sense from temperature, air quality, noise, colour, and aroma. if all of this sense can be undestand, an enviroment of service can be created to make a sense of belonging to the consumer that will make the consumer happy and satisfied [22]. This finding is contrast to Lee findings that ambient

condition have an positive effect to patient satisfaction, a couple of reason can be make from this finding because the Private Hospital of RSIA Budhi Asih doesn't meet one of the requirement of the bittner ambient condition concept which is music or harmoni that the private hospital lack of audio system in all of it's facility and have an impact to this study result, another factor of H1 denied is the limited subject and time of the research [20].

Layout spatial/functionality (X2) sig. value is 0,005 which is less then the probability value of 0,05, which means layout spatial/functionality (X2) have an effect to patient satisfaction. T count X2 is 2, 956 is more than 2,028 (T Table) so H2 is accepted. Lovelock stated that layout spatial/functionality is important to make easy mobility movement in the facility, this mobility is needed both for patient like easy access to the doctor room or nurse station when in emergency [22]. The Private Hospital RSIA Budhi Asih is still a growing hospital and the amount of patient that goes there is still low in number, thus the facility that the private hospital give is adequate enough for patient that goes there, starting from spacious waiting room and a relatively large parking lot, the layout is easy to understand because there is only one main entrance to enter the hospital and two entrance inside the hospital to the ward and emergency room, receptionist, nurse station, guard post is relatively visible and close if there is an emergency. This study is consistent like Sui and Lam previous study show that there is positve relationship between layout spatial / functionality and consumer satisfactory [18, 31].

Sign, symbol, artifact (X3) have a sig. value of 0,03 which is less than 0,05 and mean sign, symbol, artifact (x3) hipotesis is accepted and have an effect to patient satisfaction. T count X3 is 3,148 more than 2,028 (T table), H3 is accepted. Previous study like Simpeh show that and appropriate sign, symbol and artifact lead to satisfaction to the consument, the researcher found out that clear sign help to consument find his way around the place without getting lost in an unfamilliar enviroment [29]. The previous study supported this study where RSIA Budhi Asih have sign and symbol all over the hospital, clear sign of the hospital name, ward, nurse station, way pointer if there is a disaster and emergency condition.

5. CONCLUSION

This study aimed to see the effect of servicescape dimension with patient satisfaction, where the servicescape dimension consist of ambient condition, layout spatial/functionality and sign, symbol, artifact in a wholesome show a significant effect to patient satisfaction, but as a lone variable ambient condition does not show that significant effect, which can be cause of a

couple limitation factor in this study. Meanwhile layout spatial/functionality and sign, symbol, artifact have a significant effect on patient satisfaction in this study. Suggestion for future research is the type of hospital and the demographic need to be more specific because the type of a government hospital and private hospital environment and patient are different and so does patient who live in rural and urban place can have an effect about how they see and feel about servicescape.

REFERENCES

- [1] Arneill, A., & Delvin, A. 2002. Perceived quality of care: The influence of the waiting room environment. *Journal of Environmental Psychology*, 22(4), 345-360
- [2] Becker, F., Sweeney, B., & Parsons, K. 2008. Ambulatory facility design and patients' perceptions of healthcare quality. *Health Environments Research and Design Journal*, 1(4), 35-54.
- [3] Bitner, M. 1992. Servicescape: The impact of physical surroundings on customers and employees. *Journal of Marketing*. 56(2), 57- 71.
- [4] Brown, T. 2008. Design thinking. *Harvard Business Review*, 86(6), 84-92.
- [5] Bureau of Labor Statistics, U.S. Department of Labor. 2010. Career guide to industries, 2010-11 edition. Retrieved August 23, 2010, from <http://www.bls.gov/oco/cg/cgs035.htm>
- [6] Burhan Nurgiyantoro dkk. 2004. *Statistik Terapan untuk Penelitian Ilmu-ilmu Sosial*. Yogyakarta. Gadjah Mada University Press.
- [7] Fottler, M., Ford, R., Roberts, V., & Ford, E. 2000. Creating a healing environment: The importance of the service setting in the new consumer-oriented healthcare system. *Journal of Healthcare Management*, 45(2), 91-106.
- [8] Ferdinand, Augusty. 2002. *Structural Equation Modeling Dalam Penelitian Manajemen*, Semarang: BP Undip.
- [9] Francis, S. 2010. Plan for uncertainty: Design for change. In M. Kaioglou & P. Tzortzopoulos (Eds.), *Improving healthcare through built environment infrastructure* (pp. 4-52). Oxford: Blackwell.
- [10] Holder, M., Berndt, A. (2011), "The effect of changes in servicescape and service quality perceptions in a maternity unit", *International Journal of Health Care Quality Assurance*, Vol. 24 Iss: 5 pp. 389 – 405
- [11] Hutton, J., & Richardson, L. 1995. Healthscapes: The roles of the facility and physical environment on consumer
- [12] Institute of Medicine. 2001. *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: The National Academy of Sciences
- [13] International Code Council. 2009. *international building code*. Washington, DC: International Code Council
- [14] Irwin, R. 2002. IDEO's design cure. *Metropolis*. Retrieved July 15, 2010, from http://www.ideo.com/images/uploads/thinking/publications/pdfs/metropolis_1.pdf

- [15] Kotler, P. 1973. Atmospherics as a marketing tool. *Journal of Retailing*, 49(4), 48-64.
- [16] Kotler, Philip., and Keller, Kevin Lane. 2013. *Marketing Management 14th Edition* Pearson Horizon Edition. England: Pearson Education, Inc.
- [17] Kotler, Philip. 2009. *Manajemen Pemasaran Analisis, Perencanaan dan Pengendalian*, Jilid Dua, Erlangga, Jakarta.
- [18] Lam, L.W., Chan, K.W., Fong, D., Lo, F., (2011). Does the Look Matter?: The impact of casino servicescape on gaming customer satisfaction, intention to revisit, and desire to stay. *International Journal of Hospitality Management*, 30 (3), 558-567.
- [19] Leddy, K., Kaldenberg, D., & Becker, B. 2003. Timeliness in ambulatory care treatment. An examination of patient satisfaction and wait times in medical practices and outpatient test and treatment facilities. *Journal of Ambulatory Care Management*, 26(2), 138-149.
- [20] Lee, S. (2011). Evaluating serviceability of healthcare servicescapes: Service design perspective. *International Journal of Design*, 5(2), 61-71.
- [21] Lin, B., Leu, W., Breen, G., & Lin, W. 2008. Servicescape: Physical environment of hospital pharmacies and hospital pharmacists' work outcomes. *Health Care Management Review*, 33(2), 156-168.
- [22] Lovelock, C., Wirtz, J., and Mussry, J. 2010. *Marketing Service*. Edition 7. volume 2. translate by Wulandari Dian. Jakarta: PT Gelora Aksara Pratama.
- [23] Maffei, S., Mager, B., & Sangiorgi, D. 2005. Innovation through service design. From Research and theory to a network of practice. A users' driven perspective. Retried July 12, 2010, from http://www.service-design-network.org/system/files/10_Mager_Innovation_0.pdf
- [24] Martin, R. L. 2009. *The design of business: Why design thinking is the next competitive advantage*. Boston: Harvard Business Press.
- [25] Newman, A. 2007. Uncovering dimensionality in the servicescape: Towards legibility. *The Service Industries Journal*, 27(1), 15-28.
- [26] Otani, K., Waterman, B., Faulkner, K., Boslaugh, S., & Dunagan, C. 2010. How patient reactions to hospital care attributes affect the evaluation of overall quality of care, willingness to recommend, and willingness to return. *Journal of Healthcare Management*, 55(1), 25-37.
- [27] Parasuraman, A., Zeithaml, V., & Berry, L. 1988. SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
- [28] Rubin, H. 1997. The relationship between environmental design and patient medical outcomes. *Journal of Healthcare Design*, 9, 13-14.
- [29] Simpeh, K.N., Simpeh, M., Nasiru I.A., Tawiah, K.A. (2011). Servicescape and Customer Patronage of Three Star Hotels in Ghana's Metropolitan City of Accra. *European Journal of Business and Management*, 4 (4). ISSN2222-2839.
- [30] Sugiyono. 2009. *Metode Penelitian Bisnis (Pendekatan Kuantitatif, Kualitatif, dan R & D)*. Bandung: Alfabeta.
- [31] Sui, N. Y., Wan, P. Y. K., & Dong, P. (2012). The impact of the servicescape on the desire to stay in convention and exhibition centers: The case of Macao. *International Journal of Hospitality Management*, 31, 236-246. Wu

- [32] Velarde, M.D., Fry, G. and Tveit, M. (2007), "Health effects of viewing landscapes: landscape types in environmental psychology", *Urban Forestry and Urban Greening*, Vol. 6 No. 4, pp. 199-212.
- [33] Verderber, S., & Fine, D. 2000. *Healthcare architecture in an era of radical transformation*. New Haven, CT: Yale University Press.
- [34] Zeithaml, Valerie A, Bitner, Mary Jo, 2006:6. *Service Marketing: Integrating Customer Focus Across the Firm*" New York, Irwin Mc Graw Hill, Boston.