

The Relationship between Health Service Quality, Servicescape, and Socio-demographic Factors on Outpatient Satisfaction Levels at Clinic X

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Abstract

The objectives of this study were to analyze the positive association between qualities of health services towards patient satisfaction, analyze the positive association between servicescape towards patient satisfaction, and analyze the association between socio-demographic factors towards patient satisfaction. In this study, data were collected using a questionnaire. All patients visiting in the outpatient of X Clinic were recruited between July until August 2021, and 160 respondents were obtained using the convenience sampling method. Data were analyzed for descriptive and inferential statistics using the SMARTPLS program. Results of the data analysis showed that there was a significant positive association between quality of health services towards patient satisfaction, a significant positive association between servicescape towards patient satisfaction, and a significant association between socio-demographic factors towards patient satisfaction. These findings implicated the need to improve the quality of health services, servicescape, and socio-demographic factors in the clinical managerial process.

Keywords

Quality of health service; servicescape; socio-demographic factors; patient satisfaction



I. Introduction

The service industry is very diverse, such as the health sector, education sector, telecommunications sector, banking sector, and transportation sector (Byarugaba, 2013; Megawati, 2006). The health sector can be said to be one of the main service areas of every country, this is based on the important role of the health sector in maintaining and improving public health to improve overall health status (Mahendradhata, et al., 2017). Developments in various fields, including the medical field, have begun to enter a very rapid stage (Kannarkat and Mostashari, 2021; Megawati, 2006). Competition in the service industry in the medical field is becoming very tight as indicated by the increasing number of hospitals and clinics.

Development is a systematic and continuous effort made to realize something that is aspired. Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired. In addition, development is also very dependent on the availability of natural resource wealth. The availability of natural resources is one of the keys to economic growth in an area. (Shah, M. et al. 2020)

Clinics are commercial health care facilities that have changed along with the growth of the medical world. This can be interpreted as the role of the clinic which is not limited to only providing care to patients but also provide services for every patient such as services in general such as administrative needs, hotels, and restaurants without neglecting profits (Bielen and Demoulin, 2007).

The high business competition between private health facilities and the high expectations of patients for health services require clinics to keep trying to achieve patient satisfaction. In Figure 1 it can be seen that there was depreciation from 2016 to 2019.

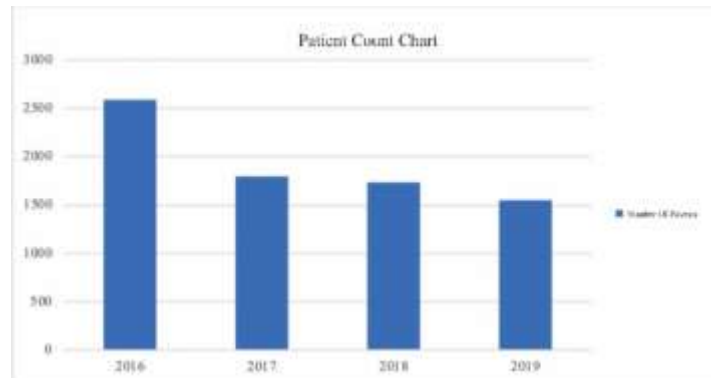


Figure 1. Clinical patient data X

The quality of health services is the degree to which medical needs are met according to good professional standards with the use of normative and ethical resources that are safe and satisfying to patients (Respati, 2015). Law (UU) No. 36 of 2009 concerning health emphasizes the importance of efforts to improve the quality of health services. The quality of good health services in the clinic will provide satisfaction to the patient. Several studies have shown that patients with high levels of satisfaction are more likely to have good relationships with the health system, which leads to improved service quality, continuity of care, and better treatment outcomes, one of which can be seen from research by Lubis (2020) which states that if The quality of health services has a significant relationship to patient satisfaction. Identification of patient needs and review of health services is the initial stage in improving the provision of health services (Mohamed, et al., 2015).

Servicescape is a model developed by Booms and Bitner to emphasize the impact of the physical environment in which services are provided. The term servicescape is defined as the non-living elements of the environment in which the service encounter occurs on the exterior (such as exterior design, signs, parking lots, surroundings, and landscapes) and the interior environment and conditions (such as air quality, temperature, lighting, decoration, and design interiors, fixtures, and placement of goods (Bitner, 1992). The exterior and interior environment are important factors to create a pleasant service experience for patients. Servicescape is one of the things that must be considered in the health sector, where servicescape can generate good perceptions of the treatment, reduce negative attitudes, behavioural intentions, and good satisfaction (Sag, et al., 2018).

Socio-demographic are the social and demographic attributes possessed by an individual in a population that determine the socio-demographic position, socio-demographic role, and benefits, and success (Thomas, et al., 2006). Socio-demography integrates biological, social, and both acquired traits, such as attributes that are common to all people (educational background, occupation, family, etc.) and common to the entire population (gender and age). Gender is something that is obtained biologically, age is obtained as a combination of the biological and social environment, while educational, occupational, and family backgrounds are obtained in the social environment (Abdullahi, 2020). Research by Dewi, et al. (2020) showed that the patient's socio-demographic characteristics, especially on the factors of age, marital status, and citizenship status, influenced patient satisfaction.

Customer satisfaction and loyalty is a crucial factor in running a business. This is because customers are a scarce resource and it is easier to keep old customers than new ones. Second, customer satisfaction and loyalty have a positive effect on the revenue earned from a company (Rosenberg and Czepiel, 2017). Customer satisfaction and loyalty have a direct relationship with each other (Khadka and Maharjan, 2017). According to Coyne (1986), there are two thresholds that affect the relationship between customer satisfaction and loyalty. When satisfaction increases and reaches a certain level, customer loyalty will increase dramatically. However, if satisfaction decreases to a certain threshold, loyalty will decrease dramatically (Oliva, et al., 1992). On this basis, it is hoped that high customer satisfaction will have a positive impact on loyalty and increase patient visits.

The main objectives of this study are to analyse: Is the quality of health services positively related to the satisfaction level of outpatients at Clinic X? Is servicescape positively related to the satisfaction level of outpatients at Clinic X? And are socio-demographic factors related to the satisfaction level of outpatients at Clinic X? Contributions on the practical side, especially for managers, will better understand matters related to the level of satisfaction of outpatients at Clinic X so that they are able to design interventions or programs that lead to strengthening the level of patient satisfaction. In addition, the results of this study can also be used as a reference or input for Clinic X in knowing the related factors and the value of these factors in an effort to become guidelines and recommendations for improving the quality of health services, services cape, socio-demographic factors, and outpatient satisfaction level.

II. Review of Literature

2.1 The relationship between the quality of health services and the level of patient satisfaction

Patients can feel more satisfied if the performance of the health services they receive meets or exceeds their expectations, and patient dissatisfaction and disappointment arise in the performance of health services that do not meet the expectations of the patients. Patient satisfaction is a measure of the patient's feelings resulting from the performance of the health services he receives (Pohan, 2006). The quality of health services has a relationship with patient satisfaction. By knowing the level of patient satisfaction, health services can improve the quality of their services (Nursalam, 2014). In order to improve the quality of health services, the measurement of patient satisfaction must be reviewed regularly and regularly in health services (Pohan, 2006).

According to Yani in Syardiansyah (2020) performance is a result of work achieved by a person in carrying out the tasks assigned to him based on skill, experience and sincerity as well as time. However according to Kasmir (2016) that performance is the result of work and work behavior of a person in a period, usually 1 year. Then the performance can be measured by the ability to complete the tasks and responsibilities given. This means that in work contains elements of the standard that achievement must be met, so, for those who reach the standards set means good performance.

Research conducted by Pangerapan, et al., (2018) stated that there is a connection between responsiveness, attention, and physical evidence with patient satisfaction at the Internal Medicine Polyclinic of GMIM Pancaran Kasih General Hospital Manado. Research conducted by Burhanuddin (2016) shows a relationship between service quality dimensions of physical evidence (tangible), reliability (reliability), responsiveness (responsiveness), assurance (assurance), and empathy (empathy) with BPJS patients' satisfaction at the Regional General Hospital. Sheikh Yusuf Gowa in 2015. Research

conducted by Andriani (2017) showed that there was a relationship between the provision of service quality and patient satisfaction at the Tigo Baleh Bukittinggi Health Centre in 2014. Based on previous findings, the following hypothesis was formulated,

H1: Quality of health services positively related to the level of satisfaction of outpatients at Clinic X

2.2. The relationship Services cape and level of patient satisfaction

The provision of health services in Indonesia is very competitive. The growth of health services in Indonesia is estimated to have a close relationship between the cost and the quality of services provided. On this basis, it is expected that patients will expect an increase in the quality of care (Francis, 2010). Health care providers have identified the importance of the servicescape or physical environment in an organization to create a good service experience for patients and families (Dharma, et al., 2019). Servicescape can provide different emotional responses to each individual, so services cape is very important in terms of creating the right emotions and responses (Sahoo and Ghosh, 2016). This is necessary because in some situations patients can experience negative emotions when arriving at health services, such as anxiety, discomfort, panic, and frustration (Pai and Chary, 2013).

Research conducted by Purnama, et al. (2019) showed that there was a significant relationship between factors and servicescape patient satisfaction that all indicators servicescape partially had a significant effect on customer satisfaction. Amin, et al. (2015) explained that for patients from the three hospitals studied, the factor servicescape is an essential aspect that plays a role in the level of patient satisfaction with health services in North Malaysia. The research systematic review conducted by Sag, et al. (2018) shows that the servicescape in health care plays a role in achieving internal and external organizational goals, which include patient satisfaction. On this basis, health care owners are advised to identify atmospheric cues that are relevant to the patient. This will help health care owners to concentrate on patient care and impact on strengthening patient relationships in the future (Baker and Taylor, 1998). Based on the above findings, the following hypothesis is formulated,

H2: Servicescape is positively related to the satisfaction level of outpatients at Clinic X

2.3.The relationship between socio-demographic factors and the level of patient satisfaction

In a health service, various individuals with various socio-demographic factors can visit the health care facility. In the same case and having the same quality of service, patient satisfaction with services can be different. This is based on factors such as the patient's socio-demographic background, such as age, gender, and education level. Age can affect actions, one of which is when disclosing complaints about services or products that do not meet expectations (Guswaman, et al., 2019). Gender can be said to be an important factor in rights, responsibilities, and determines participation as part of the social system (Wade and Tavis, 2007). Education in addition to playing a role in the formation of expertise and knowledge also has characteristics that can shape the personality and awareness of an individual or society. Basic rules, such as thought patterns and perception of difficulty are strongly influenced by the level of education. Consumer behaviour in choosing a service or product can also be influenced by the level of education (Sumarwan, 2002; Guswaman, et al., 2019).

Research conducted by Dewi, et al. (2020) showed that the socio-demographic characteristics of patients affected patient satisfaction, especially on the factors of age,

marital status, and citizenship status. Research conducted by Christasani and Satibi (2016) shows that patient demographic data is one of the related factors and has a significant value on patient satisfaction at *Puskesmas* and Pratama Clinics. This difference includes factors of employment, income, and membership status of the National Health Insurance (JKN). Djordjevic and Vasiljevic (2017) show that the level of patient satisfaction is directly related to the patient's socio-demographic factors such as age, gender, marital status, occupation, region of origin, and good behaviour. From the above findings, the following hypothesis is formulated,

H3: The patient's socio-demographic factors are related to the satisfaction level of outpatients at Clinic X

III. Research Method

This research is survey research. The questionnaire method was chosen for data collection. The target population of this study was all outpatients who came to Clinic X for an examination. The sampling technique was done by convenience sampling. The number of samples was determined based on the recommendation from Kock and Hadaya (2018) that the minimum sample size for the partial least square model or PLS-SEM is 160 samples using the method inverse square root (Kock and Hadaya, 2018).

Questionnaire items on the variables of health service quality, services cape, and level of patient satisfaction, were measured by a 5-point Likert scale, where 1 = Strongly Disagree, 2 = Disagree, 3 = Doubtful/Neutral, 4 = Agree, and 5 = Strongly Agree. The items on the construct of health service quality were adapted from Rehaman and Husnain (2018), servicescape was adapted from Cadirci and Akmaz (2017), socio-demographic factors were adapted from Adhikara, et al. (2021) and Dewi, et al. (2020), and outpatient satisfaction levels adapted from Anderson and Fornell (2000). Statistical analysis using the PLS-SEM approach with the help of the SmartPLS 3.0 program.

IV. Results and Discussion

4.1 Measurement Model

In this stage, validity and reliability testing is carried out before evaluating the structural model. The validity test is used to determine the ability of the research instrument to measure the indicators that must be measured. Reliability tests are used to measure the consistency of measuring instruments in measuring a concept or respondents in answering questionnaire indicators (Treggonowati and Kulsum, 2018). Convergent validity is seen by the correlation between indicator scores and variable scores using outer loading and average variance extracted (AVE). Outer loading is an individual reflective measure that is correlated with the construct to be measured (Ghozali, 2008). AVE is another method used to assess discriminant validity by looking at the correlation between constructs and other constructs in the research model (Ghozali, 2008). The minimum values that must be met for AVE and outer loadings are 0.5 and 0.7, respectively (Hair, et al., 2017). The reliability test was carried out by measuring the composite reliability (CR) value, where a result above 0.7 was declared a construct with good reliability.

The results of data processing (Table 1) indicate that the measurement results of the instrument are declared valid. The calculation results show that the AVE value ranges from 0.585 to 0.913. Likewise for the value of outer loadings, namely 0.886 to 0.969. Both of these can be interpreted that each variable has met convergent validity.

Table 1. Evaluation of the measurement model

| constructs and items | | <i>Outer loading</i> |
|---|--|----------------------|
| Health Service Quality/X1 (AVE = 0.585, CR = 0.873) | | |
| X1.1 | The doctor gives clear information about the current condition | 0,920 |
| X1.2 | doctor explains the action to be taken | 0,951 |
| X1.3 | doctor is skilled in providing services | 0,935 |
| X1.4 | Administrative system Clinic X is good | 0,933 |
| X1.5 | Doctors can be trusted by patients | 0,919 |
| X1.6 | Doctors are always patient in serving patients | 0,938 |
| X1.7 | Doctors have insight to answer patient questions | 0,936 |
| X1.8 | Doctor is able to handle patient needs | 0,935 |
| X1.9 | Doctor examines patient before making a certificate | 0,923 |
| X1.10 | The waiting room feels comfortable | 0,914 |
| X1.11 | The examination room is clean and tidy | 0,938 |
| X1.12 | The doctor has an attractive appearance | 0,913 |
| X1.13 | There are room instructions | 0,925 |
| X1.14 | tools are available and complete | 0,886 |
| X1.15 | The doctor gives the patient the opportunity to ask questions and submit complaints | 0,969 |
| X1.16 | Doctors have appropriate working hours | 0,961 |
| X1.17 | Doctors are able to understand patient needs | 0,949 |
| X1.18 | Doctors respond quickly to patients | 0,968 |
| X1.19 | Doctors act quickly when patients need | 0,957 |
| X1.20 | Doctors are always willing and ready to help | 0,963 |
| <i>Servicescape/X2 (AVE = 0,913, CR = 0,778)</i> | | |
| X2.1 | Room temperature in Clinic X is cool | 0,911 |
| X2.2 | The lighting in Clinic X is bright | 0,937 |
| X2.3 | The room at Clinic X has a nice | 0,942 |
| X2.4 | The room at Clinic X is well organized | 0,892 |
| X2.5 | I can find parking easily at Clinic X | 0,900 |
| X2.6 | Clinic X has equipment that is still functioning well | 0,895 |
| X2.7 | Clinic X can be easily found | 0,938 |
| X2.8 | Doctors outside the clinic are in place | 0,929 |
| X2.9 | Signposts in the clinic are very clear, so I can easily find out the rooms in the clinic. Clinic X | 0,945 |
| The Patient satisfaction level/Y1 (AVE = 0.830, CR = 0.961) | | |
| Y1 | I am satisfied with the services provided by doctors at the clinic X | 0,902 |
| Y2 | service quality is according to my wishes | 0,909 |
| Y3 | services provided by the doctor are according to my wishes | 0,917 |
| Y4 | Clinic facilities X is according to my wishes | 0,922 |
| Y5 | Clinic environment X is according to my wishes | 0,906 |

Source: The results of data processing

Furthermore, **Table 2** shows that the test discriminant validity with heterotrait-monotrait ratio (HTMT). A good HTMT test result is <0.9 (Henseler, et al., 2015).

Table 2. Measurement of discriminant validity using the heterotrait-monotrait ratio method

| | Quality of Health* | Servicescape* | Level of patient satisfaction | Reliability | Assurance | Tangibles | Empathy | Responsiveness | Ambient | Space and functionally | Signs, symbols and artifacts |
|-------------------------------|--------------------|---------------|-------------------------------|-------------|-----------|-----------|---------|----------------|---------|------------------------|------------------------------|
| Quality of Health* | | | | | | | | | | | |
| Servicescape | 0.294 | | | | | | | | | | |
| Level of patient satisfaction | 0.472 | 0.668 | | | | | | | | | |
| Reliability** | 0.710** | 0.334 | 0.361 | | | | | | | | |
| Assurance** | 0.877** | 0.112 | 0.404 | 0.417 | | | | | | | |
| Tangibles** | 0.892** | 0.137 | 0.370 | 0.414 | 0.760 | | | | | | |
| Empathy* | 0.859** | 0.347 | 0.540 | 0.535 | 0.588 | 0.655 | | | | | |
| Responsiveness** | 0.635** | 0.289 | 0.106 | 0.315 | 0.360 | 0.364 | 0.558 | | | | |
| Ambient* | 0.238 | 0.848*** | 0.399 | 0.288 | 0.083 | 0.107 | 0.224 | 0.287 | | | |
| Space and functionally** | 0.175 | 0.890*** | 0.716 | 0.218 | 0.064 | 0.095 | 0.166 | 0.171 | 0.429 | | |
| Signs, symbols and artifacts* | 0.269 | 0.890*** | 0.455 | 0.269 | 0.113 | 0.117 | 0.411 | 0.212 | 0.453 | 0.535 | |

Source: Results of data processing / Note: *=Higher Order Construct (HOC); **=Lower Order Construct (LOC); ***= it cannot be enforced discriminant validity between LOC and HOC (Hair, et al., 2018); threshold <0.9 (Henseler, et al., 2014; Hair, et al., 2018)

4.2 Structural Model

In the structural model, the tests used are test collinearity, coefficient determination (R-square), and hypothesis testing. The test was collinearity conducted to determine whether the research model has a tendency to collinearity. A good value of variance inflation factor (VIF) is <5 which indicates the absence of multicollinearity (Hair et al., 2017). Table 3 shows the VIF results of each independent variable is <5.

Table 3. The test collinearity uses the value of the variance inflation factor (VIF)

| Construction | Level of patient satisfaction |
|----------------------------|-------------------------------|
| Quality of Health* | 1,051 |
| Servicescape | 1,207 |
| Factor of sociodemographic | 1,162 |

Source: Results of data processing

The greater the R-square value, the greater the influence of certain independent variables on the dependent variable. The result of the R-square measurement is 0.515 or 51.5%, which means that the value variation on the construct of patient satisfaction level is explained by variations in the value of health service quality, servicescape, and socio-demographic factors are 51.5%. The remaining 48.5% is explained by other constructs.

Furthermore, hypothesis testing is done by paying attention to the path coefficient and p-value. The path coefficient is needed to see the direction of the coefficient between the independent variable and the dependent variable, if the direction of the coefficient is in accordance with the hypothesis, then the hypothesis is supported and if the direction of the coefficient is not in accordance with the hypothesis, then the hypothesis is not supported (Wong, 2013). The p-value is used to see the significance of the variable with a standard value of <0.05 (Haryono, 2017). Table 4 shows that the path coefficient direction of health service quality, servicescape, and sociodemographic factors is positive according to the hypothesis and has a significant relationship between each independent variable (health service quality, servicescape, and socio-demographic factors) with the dependent variable (level of satisfaction) outpatients at Clinic X).

Table 4. *Size and significant of path coefficient*

| | <i>Standardized Path Coefficient</i> | <i>P Value</i> | <i>Decision</i> |
|---|--------------------------------------|----------------|-----------------|
| H ₁ : The quality of health services is positively related to the level of satisfaction of outpatients at Clinic X | +0,333 | 0,000 | Supported |
| H ₂ : Servicescape is positively related to the satisfaction level of outpatients at Clinic X | +0,485 | 0,000 | Supported |
| H ₃ : The patient's socio-demographic factors are related to the satisfaction level of outpatients at Clinic X | +0,163 | 0,014 | Supported |

Source: Results of data processing

4.3 Discussion

This discussion will discuss the results of the study including the influence of the quality of health, servicescape, and socio-demographic factors on the level of patient satisfaction at Clinic X. The interpretation of the results of the study was compared with the results of previous studies accordingly. The results of hypothesis testing (H1) prove that the variable quality of health services is positively related to patient satisfaction, with a coefficient value of +0.333. In an effort to provide the best service to patients, focus on patients by prioritizing five dimensions of service quality adaptation of the ServQual methodology (Elleuch, 2008; Shahin, 2006). Dimensions of service quality based on ServQual include five dimensions namely, reliability, assurance (guarantee), tangibles (physical evidence), empathy, and responsiveness (responsiveness of service) (Shahin, 2006). Good service quality can create a feeling of satisfaction from patients (Rehaman and Husnain, 2018). Research conducted by Tantarto, et al. (2020) shows that there is a relationship between service quality health with patient satisfaction. A good quality of

health services will affect patient satisfaction and can be achieved by meeting the needs and desires of patients, and the proper delivery of patient expectations (Pratama and Hartini, 2020). High quality of service will help an industry build and maintain good customer relationships and deliver better customer satisfaction and customer-industry identification. Research by Mohamed and Azizan (2015) emphasizes the importance of the quality of health services in increasing patient satisfaction. This is in line with this study where good service quality will provide high satisfaction. When the quality of health services is conveyed and understood as high-quality service quality, patient expectations will be more fulfilled, patients will give a positive emotional evaluation of services, and patient satisfaction will be achieved (Pratama and Hartini, 2020).

The results of hypothesis testing (H2) prove that the variable servicescape is positively related to patient satisfaction with a coefficient value of +0.485. Health care providers have an important role in creating a good service experience for patients and families (Dharma, et al., 2019). Servicescape can provide different emotional responses to each individual (Sahoo and Ghosh, 2016). In certain circumstances, patients can experience negative emotions, such as anxiety, discomfort, panic, and frustration (Pai and Cary, 2013). In addition, servicescape can give a good impression in treatment and reduce negative emotions. A study by Siwi (2017) and Amin, et al. (2016) found that servicescape affects patient satisfaction. This is supported by the findings of this study where there is an influence between servicescape and the level of patient satisfaction. Patients who are satisfied with the dimension servicescape can give patients a sense of belonging and have a good impact on the behavioral intentions of the patients themselves (Amin, et al., 2016).

The results of hypothesis testing (H3) prove that the socio-demographic factor variable is related to patient satisfaction with a coefficient of +0.163. Even though the quality of service is the same and with a similar cases, the level of patient satisfaction can be felt differently. This depends on the patient's socio-demographic background, such as gender, age, and education level. Gender is an important factor in rights, responsibilities, and assigning roles that are part of the social system (Wade and Tavis, 2007). Age can affect actions, where one of them is in voicing dislikes and complaints on a service or product that has not reached expectations (Gusnawan, et al., 2019). Values, such as thinking patterns and perceptions of a case or problem, can be influenced by the level of education. Research by Oroh, et al. (2014) stated that respondents who had a higher level of satisfaction were male (87.2%). Gender has an impact on how a service is rendered. Women have a keen eye for appearance, whereas men do not focus on that part (Nguyen, et al., 2020; Voss and Cova, 2006). Research by Dewi, et al. (2020) showed that the socio-demographic characteristics of patients affected patient satisfaction, especially on the factors of age, marital status, and citizenship status. Djordjevic and Vasiljevic (2017) show that the level of patient satisfaction is directly related to the patient's socio-demographic factors, such as age, gender, marital status, occupation, region of origin, and good behavior. Research by Widayati (2018) also shows that patient satisfaction is influenced by income level, education level, frequency of visits, and quality of service.

V. Conclusion

Based on the results of data analysis and discussions that have been carried out in this study, it can be concluded that the quality of health services is positively related to the level of satisfaction of outpatients at Clinic X. and services cape is positively related to the level of satisfaction of outpatients at Clinic X. Meanwhile, socio-demographic factors of patients are related to the level of satisfaction of outpatients at Clinic X

Suggestions

This study has limitations, including the sample of this study using only the census, for better results, it is hoped that future studies can increase the number of samples and can modify sampling not only in one clinic but in several similar clinics to see are there any differences in results between clinics.

This study only focuses on quantitative research, for better results it is recommended to also use qualitative data. Evaluation of the quality of health care and services cape by patients is a subjective process and quantitative measurement tools such as questionnaires cannot provide a subjective assessment of the patient. Qualitative methods in future research can strengthen the explanation of the relationship between health service quality and servicescape with patient satisfaction. In this study, the variables studied were the quality of health, servicescape and socio-demographic factors on patient satisfaction. In future research, it is suggested to add or use other variables such as psychological factors, emotional factors, and clinical image to patient satisfaction.

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