

Identification of Service Quality Factors and Patient Satisfaction Level toward Specialist Doctor Treatment

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Abstract: One of the patient dissatisfaction problems in medical services is an ineffective communication between patients and doctors which impacts on subsequent visits. To increase the patient satisfaction level, the quality factors of a specialist doctors treatment are identified. This study used the cross sectional method with quantitative analytic to the questionnaire of primary respondents. Respondent population are 191 outpatients in specialist polyclinic unit with 66 samples. Sampling was done by non-random (non-probability) sampling with purposive sampling. Logistic regression was used to analyze the respondent's data. The results of the bivariate analysis showed good and satisfied results namely tangibles about 96.2%, responsiveness about 94.6%, empathy about 94.4%, control about 94.7%, trust about 81.2%, self-disclosure about 80.6%, and confirmation about 96.4%. While the results of multivariate analysis showed that there were only 5 variables that significantly affected patient satisfaction ($p < 0.05$), namely the tangibles variable (OR=2.455), responsiveness (OR=4.573), empathy (OR=4.841), control (OR=3.970), and confirmation (OR=3.656). The highest result for bivariate was shown in the confirmation about 96.4% and for multivariate was on empathy with OR value 4.841.

1 INTRODUCTION

The basic nature of a hospital is the fulfillment of the patients needs and demands in their health problems solving. Patients always expect an excellent treatment that is responsive, comfortable, ready and fast toward patient illness complaints (Hatibie, 2015). Patients have the right to choose a hospital based on the quality of health services so that patients can satisfy their needs as patients (Depkes R.I., 2013). If the patient is dissatisfied (such as waiting too long, not friendly, less skilled, less reliable), will make the patient disappointed, such as research on outpatients in several hospitals (Rensiner, 2018; Ariffin, 2017 and David, 2014). According to Aziati and Liddy, almost all patients (94%) believe that waiting time negatively affects daily life (Aziati, 2018; and Liddy, 2017; Hassan, 2015). Based on satisfaction factors, patients can also create public perceptions about the image of a hospital (Depkes R.I., 2014). The average patient waiting time was 70.18 minutes and was considered to be a long waiting time category (> 60 minutes) was shown by Laeliah N., et al' research in the outpatient installation of Indramayu District Hospital. The patient satisfaction level including

dimensions of tangibles, empathy, assurance, and responsiveness are considered quite satisfied categories, while the reliability dimension is considered to be satisfied, based on the five dimensions of service quality. So the waiting time for outpatient services has a relationship with patient satisfaction that is p about 0.042 or chi-square correlation value about 4.135 (Laeliyah, 2017).

The success of a hospital is not only seen in the completeness of the facilities that are superior, the attitude and services of human resources are also elements that have a significant effect on the services produced and perceived by patients. Patients will turn to other hospitals that meet their expectations, this is because patients are a very valuable asset in developing the hospital industry (Vonikartika, 2018; Turnip et al, 2020; Wijaya et al, 2019). One of the human resources who provide health services in a hospital is a specialist doctor. However, medical service arrangements, especially specialist doctors, still have various obstacles, namely that specialist staff are lacking and have not been evenly distributed in various regions in Indonesia. An imbalance of medical personnel, facilities and infrastructure, various regulations that have not been implemented

properly, and the behavior of doctors as medical personnel cause problems such as lack of communication between doctors and patients which ultimately greatly affects the quality of hospital medical services (Azwar B, 2005). Patients usually always compare or ask others recommendations to choose a doctor for treatment (therapy). Aspects related to service quality include responsiveness, reliability (Supartiningsih, 2017; Pathak, 2017; Aliman, 2016; Hanggraningrum, 2017), empathy and assurance (Tacoh, 2013), and the appearance of the hospital (tangibles) (Parasuraman, 1994; Suaib et al., 2011).

Patient satisfaction will be fulfilled if the doctor's professional behavior in providing health services is as expected by the patient or family. Stages of specialist doctors providing health services include history, physical examination, therapy, and termination (E. Gusti, 2016). Specialists in providing health services that are friendly, comfortable, caring and able to accommodate the needs of patients are demands that must be met by the hospital. Even though in reality, the implementation of health services is still oriented towards the interests of providers rather than the interests of patients and the community (Murtiana, 2016). Outpatient medical facilities as one of the busiest in Malaysia found that the highest patient satisfaction is in the service factor or tangibles priority, especially technical quality, accessibility, and comfort but satisfaction in terms of service orientation by doctors is low, especially communication during consultations, time spent with doctors, and interpersonal behaviour (Ganasegeran, 2015; Baequny, 2009; Kaban, 2014).

According to the research of Lucas et al, about 70 to 80% of medical errors are strongly related to human error (Lucas, 2017). Hamdan's research on service quality factors covering 4 dimensions, namely infrastructure, procedures, interactions, and personal, found that patient satisfaction greatly affects patient loyalty (Hamdan, 2019). Some studies have argued that patient satisfaction is needed to guide patient loyalty (Singh, 2018, Meesala, 2018 and Yacob, 2016). Basic training on communication skills in sustainably and patient activation programs must be established to increase patient satisfaction (Azizam, 2015). Agustin N et al have tested the effect of service quality with word-based communication in pleasing patients, the results show that better quality will make patients more satisfied. Satisfied patients will be motivated to speak and this will increase the number of patients (Agustin, 2018).

Research by Kashkoli SA et al on eight dimensions of responsiveness (i.e, dignity,

communication, confidentiality, autonomy, immediate attention, social support, quality of basic facilities, and provider choice) and found that the responsiveness of the hospital has a strong influence on overall patient satisfaction. Health care facilities should consider incorporating responsiveness efforts into their strategic plans. It is recommended that patients should be involved in their treatment process and have the right to choose their doctor (Kashkoli, 2017). Research by Chandra S et al. about some factor related to patient satisfaction with 410 outpatients, the relationship between interpersonal skills, and physician communication attitudes, patient trust and patient satisfaction were found, but found no relationship with waiting time. However, patients state that to get a satisfactory consultation, it is worth to be wait (Chandra, 2019; Mayasari, 2015). Other studies have shown that patients who have a longer waiting experience tended to perceive their health services as less accessible and patients less able to accept. In addition, spending more time receiving care services does not always correlate with more positive service perceptions. Although the waiting problem is difficult to solve by actually reducing waiting time, it could be possible to better manage it such as how patients feel about the length of time they have to wait and the amount of time they spend receiving the service. Doctors and nurses can also be encouraged to give empathy and respect to patients, provide personal space for patients to talk with doctors when needed, and treat patients family members or friends in friendly ways (Xie, 2017).

In previous studies, the majority found discussion related to patient satisfaction with service quality in terms of waiting time, length of treatment, and communication with doctors that included tangible, responsiveness, reliability, assurance, and empathy. In this study, the author examined the quality of specialist doctor's services and the relationship between patient satisfactions with doctors' services in the dimensions of tangible, responsiveness, empathy, control, trust, self-disclosure, and confirmation were evaluated with a case study by a specialist.

2 METHOD

Based on the Helsinki declaration, the research protocol No. 004 / KEPK / UNPRI / 2019 has been approved by the Health Research Ethics Commission (KEPK), Universitas Prima Medan with KEPKKN Registration Number: 1271012S Registered / Accredited. The research was conducted with quantitative analytics. Analytical research aims to

evaluate the factors that influence the quality of treatments (services) and the patient satisfaction level with the services of obgyn and pediatrician specialist with case studies of outpatient in Royal Prima General Hospital unit at 2019 (Figure 1). The author choosed pediatrician and obstetrician because the questionnaire was first tested for validity and reliability in the pediatrician and obstetrician Polyclinic Installation at Stella Maris Hospital, in order to get the same type of categories for the samples. The research design with cross sectional method was supported by data directly through filling the questionnaire. The respondent populations used were 191 patients with sample of 66 patients. Sampling was done by non-random (non-probability) sampling, which sampling is not based on predicted probability, but is solely based on mere practicality. With a purposive sampling technique, the researcher takes a sample based on a particular consideration made by the researcher herself based on the characteristics or traits of the population that have been known beforehand without making comparisons (Notoatmodjo, 2018).

The sample in this study is determined based on the formula of determination sample for survey research. The large sample was calculated using the Slovin formula, as follows:

$$n = \frac{N}{1 + N(d)^2} \quad (1)$$

Description: n = the number of samples; N = the number of population; d = Precision 10 %.

Based on the calculation results that the number of samples was 66 patients.

The inclusion patients criteria for selected sample were handled by Obstetrics and Gynecology specialists and Pediatricians, able to communicate well (can read and write), willing to be respondents, if they have a physically weak condition or children, then those who fill out the questionnaire were their families. While the exclusion patient criteria were general practitioners, did not answer the questionnaire in full (unable to read and write), were not willing to be respondents, and patients who were medical personnel. The data collection instrument used was a questionnaire (observation form). In order to be directed observation and to obtain the really needed data, it is also necessary to conduct an observation by using the list of questions like sheets or checklists that provided in advance. The requirements for the questionnaire are relevant to the objectives and research hypotheses, easy to ask, easy to answer, avoid interviewer bias, generate

standardized data and the data obtained is easily processed.

As shown in Figure 2, primary data in this study include the identity of respondents and the services of specialist doctors consisting of direct evidence (tangibles), responsiveness, empathy and patient satisfaction (ie, in terms of empathy, control (guided), trust, self-disclosure, and confirmation) obtained through a questionnaire that has been prepared in advance. A questionnaire was first tested for validity and reliability to determine the extent to which the questionnaire could be used as a measurement tool that represents the cause and variable variables due to the research. The questionnaire test was conducted on 20 outpatients in the pediatrician and obstetrician Polyclinic Installation at Stella Maris Hospital.

Validity is an index to show a measuring instrument capability of measuring well (Notoatmodjo, 2018; Pohan, 2015). Validity test is done by using the correlation technique with Pearson Product Moment Correlation Coefficient (r), determining the correlation between the questions with the total construct score or variable. A construct is declared valid if there is a positive and significant correlation. The correlation value must be greater than 0.03 or the value of the Corrected Indicator Total Correlation in the SPSS output is greater than 0.30 (Ghozali, 2016). Reliability is an index that shows the confidence level in a measuring instrument or the level of reliability (Notoatmodjo, 2018; Pohan, 2015). To determine the reliability of a variable, a statistical test was performed using the Cronbach's Alpha coefficient with the reliability requirement in the form of a Cronbach's Alpha value > 0.6.19 (Kaban, 2014). Reliability calculations are performed only on questions that already have a validity test (Notoatmodjo, 2018).

The questionnaire that had been tested for validity and reliability was then filled in by 66 samples at the Royal Prima Hospital. The process of processing data by computer is carried out through the following stages: editing, coding, data entry or processing, and data cleaning (filtering) to find out the missing data, data variation, and data consistency. The statistical processing and analysis of data obtained was done by computerization using Statistical Package for Social Sciences (SPSS) tools. Initially the data was tested for normality to determine the test performed.

Univariate analysis aims to explain or describe the characteristics of each research variable (Notoadmodjo, 2018), to get a description of the frequency distribution of sociodemographic characteristics, like sex, ages, educations, occupations, and payment model.

Bivariate analysis used quadratic kai test intended to find out wheather there is or not a relationship between the two variables namely the dependent variable and the independent variable, reluctantly using the chi square test with the significance level ($\alpha=0.05$), with the following criteria: H_0 is rejected if $p < \alpha$ (0.05) then there is a relationship between the independent variable and the dependent variabel , H_0 is accepted if $p > \alpha$ (0.05) then there is no relationship between the independent variable and dependent variable (Sugiyono,2017). Quadratic test can be done if the test requirements are met, i.e no more than 20% of cells that have an expectation value of less than 5 withdrawal conclusions are carried out based on the p value of Pearson Chi-Square (Trihendradi, 2013). If the quadratic test requirements are not met, the Fisher’s absolute test is used (Hastono&Sabri, 2010). Conclusions drawn on the Fisher’s absolute test are based on the p value of the Fisher’s Exact Test contained in the exact Sig column (2-sided) (Dahlan, 2011). If $p < \alpha$ value is obtained, either from the square test or Fisher’s absolute test, then it is said that there is a significant relationship between the two variables tested. (Dahlan, 2011).

Multivariate analysis was performed to see whether there was an influence between the independent variables together with the dependent variable using logistic regression tests of significance ($\alpha=0.05$,with the criteria: H_0 was rejected if $p < \alpha$ (0.05) then there is an influence between the independent variables with the dependent variables. H_0 was accepted if $p > \alpha$ (0.05) then there is no influence between the independent variables with the dependent variables.



Figure 1: Respondents and data collection at the hospital.

Logistic regression is an approach to making predictive models or commonly referred to as Ordinary Least Squares (OLS) regression. Researchers predict the dependent variable on a dichotomy scale. The dichotomy scale in question is a nominal data scale with two categories, for example: Yes or No, Good or Bad, or High and Low (Ghozali, 2016).

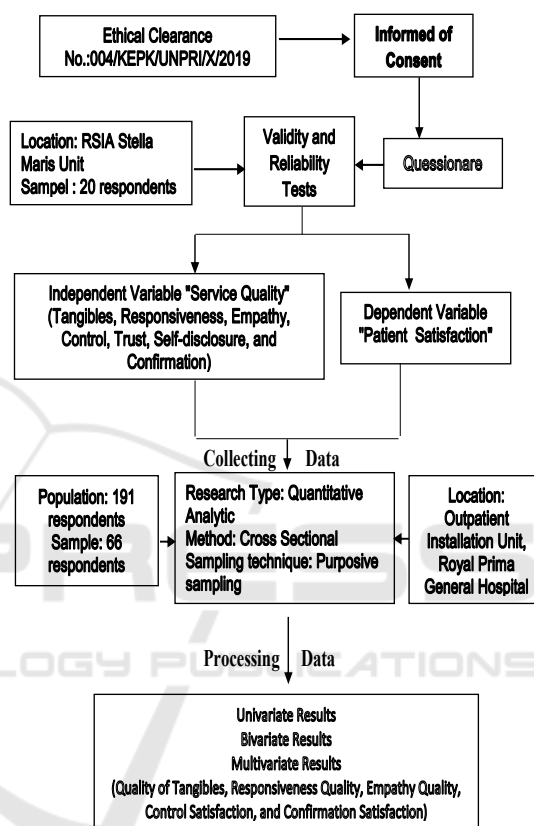


Figure 2: Scheme of Research Process.

3 RESULTS AND DISCUSSIONS

3.1 Validation and Reliability

The results of the validity test against tangibles and responsiveness as in Table 1 shows that of the 10 questions that were tested for validity, 9 questions were declared valid as seen from the value of r-count (r_c) > r-table (r_t) (> 0.333) and there was 1 question declared invalid (Cannot be used as a question in the study because the calculated value < rtable (<0.333). While the empathy validity test results show that 10 questions were declared valid since the value of $r_c > r_t$.

Table 1: Test Results of Validity of Tangibles, Responsiveness, and Empathy (rt = 0.333).

No	Tangibles		Responsiveness		Empathy	
	rc	v	rc	v	rc	v
1	0.446	+	0.223	-	0.865	+
2	0.566	+	0.517	+	0.665	+
3	0.855	+	0.575	+	0.750	+
4	0.381	+	0.727	+	0.797	+
5	0.701	+	0.875	+	0.738	+
6	0.786	+	0.785	+	0.787	+
7	0.297	-	0.713	+	0.846	+
8	0.846	+	0.761	+	0.819	+
9	0.604	+	0.704	+	0.685	+
10	0.622	+	0.687	+	0.822	+

The results of the validity test as in Table 2 show that from the 5 questions carried out it was found that the five questions were declared valid on the control variable, trust, self-disclosure and confirmation due to $rc > rt$ (> 0.333).

Table 2: Results of Full Validity, Trust, Self-disclosure, and Confirmation Tests (rt = 0.444).

No	Control		Trust		Self-disclosure		Confirmation	
	rc	v	rc	v	rc	v	rc	v
1	0.773	+	0.783	+	0.953	+	0.727	+
2	0.810	+	0.823	+	0.953	+	0.806	+
3	0.795	+	0.790	+	0.915	+	0.737	+
4	0.602	+	0.697	+	0.834	+	0.747	+
5	0.795	+	0.912	+	0.597	+	0.768	+

Based on Table 3 the reliability test results on valid questions show that tangibles, responsiveness, empathy, control, trust, self-disclosure and confirmation are reliable because the Cronbach's Alpha value > 0.6 .

Table 3: Test Results of Tangibles, Reliability, Responsiveness, Empathy, Control, Self-disclosure, and Confirmation.

Variable	Cronbach's Alpha	N of Items
Tangibles	0.753	11
Responsiveness	0.757	11
Empathy	0.778	11
Control	0.796	6
Satisfaction	0.810	6
Self-Openness	0.818	6
Confirmation	0.795	6

3.2 Measured Data using Questionnaire

The questionnaire weight value from 66 samples are shown in Table 4. The measured data are categorized into two groups based on who is ordinal ie satisfied or dissatisfied as in Table 4. . S is Sample, Ta is Tangibles, R is Responsiveness, Em is Emphaty, Co is Control, Tr is Trust, SD is Self Disclosure, and Cf is Confirmation.

Test of ordinal scale from 10 questions service quality of specialist doctor (tangibles, responsiveness and empathy), that is, the group called not good if the the questionnaire weight value are between 9-27, while the group called good if the value are between 28-50. Whereas for outpatient satisfaction variable which has 5 questions namely control, trust, self disclosure, and confirmation, it is also divided into two ordinal scales, namely the group called not satisfied if the questionnaire weight value is between 5-15, and the group called satisfied if the questionnaire weight value is between 16-25.

Table 4. The recorded data (questionnaire weight value) from 66 respondents using questionnaire.

Subject 1 - 33								Subjet 34 - 66							
S	Ta	R	Em	Co	Tr	SD	Cf	S	Ta	R	Em	Co	Tr	SD	Cf
1	36	36	40	20	20	20	20	34	36	36	40	19	20	20	18
2	38	39	41	20	21	19	17	35	45	45	40	25	25	25	25
3	39	38	43	21	21	22	20	36	45	45	44	25	25	25	25
4	38	36	40	20	20	20	20	37	36	41	50	22	22	25	20
5	36	36	40	20	20	20	20	38	36	36	50	21	20	20	20
6	36	36	40	20	20	20	20	39	36	36	44	20	20	20	20
7	37	45	45	20	25	22	21	40	39	40	47	23	22	22	21
8	44	45	50	20	20	20	20	41	45	45	40	24	20	23	22
9	36	36	40	20	20	22	24	42	45	45	43	25	25	25	25
10	38	36	40	20	20	20	20	43	40	40	40	22	24	23	21
11	36	36	40	20	20	20	20	44	34	45	50	25	20	25	22
12	36	37	40	20	20	20	20	45	36	36	40	20	20	20	20
13	36	38	47	20	20	22	21	46	38	43	43	23	21	22	22
14	45	45	50	25	25	25	25	47	37	36	40	20	20	20	15
15	44	45	50	25	25	25	25	48	45	45	50	25	20	20	20
16	39	37	40	24	25	25	25	49	36	36	40	20	20	20	20
17	39	38	45	20	25	23	22	50	39	40	45	22	22	22	23
18	40	40	45	23	30	22	21	51	41	41	42	20	20	20	20
19	36	40	41	20	21	20	21	52	36	36	40	20	20	20	20
20	31	37	39	16	17	21	18	53	42	38	40	20	24	21	19
21	36	40	22	20	20	20	20	54	38	43	40	20	20	20	20
22	38	41	40	20	20	20	20	55	36	36	40	20	20	20	20
23	36	44	45	23	22	22	23	56	36	36	40	20	20	20	18
24	36	36	40	20	20	20	21	57	34	36	38	20	20	20	20
25	31	36	50	20	20	20	20	58	37	45	47	23	24	23	25
26	36	35	49	20	20	20	17	59	36	36	40	20	20	20	20
27	39	36	50	20	20	20	20	60	34	36	40	20	20	20	20
28	36	43	50	25	25	21	20	61	43	45	50	25	25	25	25
29	36	45	42	25	25	25	25	62	36	38	40	23	23	20	19
30	38	45	41	25	25	24	21	63	36	43	44	24	24	23	21
31	38	45	50	25	25	25	25	64	36	36	40	20	20	20	20
32	45	45	50	25	25	25	25	65	45	45	50	25	25	25	25
33	39	45	44	20	25	21	24	66	45	43	50	23	24	23	24

Description: S is Sample, Ta is Tangibles, R is Responsiveness, Em is Emphaty, Co is Control, Tr is Trust, SD is Self Disclosure, and Cf is Confirmation.

3.3 Univariate Analysis

Table 5 shows the univariate analysis about the characteristics distribution of involved respondents in the research. It was found that of the 66 observed

respondents, majority of respondents were female about 78.8%. Respondents aged between 19-30 years and 31-42 years were 39.4%. Respondents with high school education were 40.9%, unemployed about 6.4%, treatment payments using the BPJS model were 72.7%.

Table 1: Test Results of Validity of Tangibles, Responsiveness, and Empathy (rt = 0.333).

Variable	n=66	%
Sex		
Female	52	78.8
Male	14	21.2
Ages (years)		
19-30	26	39.4
31-42	26	39.4
43-54	8	12.1
55-70	8	9.1
Educations		
No Education	2	3.0
Elementary school	1	1.5
Middle School	2	3.0
High School	27	40.9
Diploma	10	15.2
Bachelor	24	36.4
Occupation		
Unemployee	24	36.4
Employee	13	19.7
entrepreneur	12	18.2
Others	17	25.8
Payment Model		
General	12	18.2
BPJS	48	72.7
Insurance	3	4.5
Company	3	4.5

3.4 Bivariate Analysis

The Chi Square test with a significance level (α) = 0.05 was used to test the relationship between patient satisfaction level and the quality with the services of specialist doctors (Sugiyono, 2017). The purpose of the bivariate analysis is to obtain a relationship between the independent variables (service quality which includes: tangibles, responsiveness, empathy and control satisfaction, satisfaction of trust, satisfaction of self-disclosure, and satisfaction of confirmation) with the dependent variable (patient satisfaction level). Table 6 is a cross tabulation between all observed variables (i.e., Tangibles quality, responsiveness, empathy, control, trust, self-disclosure, and confirmation) towards patient satisfaction level.

3.4.1 Tangibles Factors

From the 66 observed respondents, there were 52 respondents who rated the quality of tangibles as good with 96.2% of whom were satisfied, while the remaining 3.8% felt not satisfied with the service. Furthermore, there were 14 people who rated the quality of tangibles as not good with 71.4% of them feel dissatisfied and the remaining 28.8% feel satisfied with the service. In the results of analysis with chi square obtained the p value of 0.001 ($p < \alpha$), it can be concluded that the variable quality of tangibles had a significant relationship with patient satisfaction towards the services of specialist doctors. The data that obtained from questionnaire showed the dimension of direct evidence (tangibles) is considered good and the patient feels satisfied with the doctor including appearance, friendliness, choice of language (easy to understand or not), special attention, touch, cleanliness, neatness and uniform use, politeness, friendliness, and desire to help are embodiment of the quality of service from doctors that can be directly felt by patients. Whereas the variable quality of tangibles that considered not good but the patient was satisfied with the doctor's service was about 28.8%, this is because the Hospital used in this study had 2 different buildings in the same place namely Building A and Building B. Building A is an outpatient polyclinic located on the 2nd floor, while Building B is on the 1st floor. Directions to the outpatient installation polyclinic for both buildings are oftenly illegible or rarely read by patients, so patients or their families are oftenly confused looking for the location of the separated polyclinic in the building.

3.4.2 Responsiveness Factors

In the responsiveness quality, there were 56 respondents who rated the responsiveness well where 94.6% of them were satisfied, while the remaining 5.4% felt dissatisfied with the service. Furthermore, there were 10 people who rated the responsiveness as not good, where 90.0% of them felt dissatisfied with the service, while the remaining 10.0% were satisfied with the service. In the results of the analysis with chi square obtained p value of 0.001 ($p < \alpha$), it can be concluded that the variable quality of responsiveness had a significant relationship with patient satisfaction towards the doctor's service. The questionnaire results showed that the influence between the dimensions of responsiveness (doctor's responsiveness) is considered good with a good level of satisfaction if able to examine patients immediately, quickly provide treatment or action,

able to listen to and respond to every patient's complaint, answer every question about a patient's illness, take action accordingly procedures, provide opportunities to ask patients, quickly serve when patients need immediate help, able to respond quickly to resolve patient complaints, provide clear and easy to understand information, and always ask for patient complaints (Muninjaya, 2011). The responsiveness quality variable is not good but the level of patient satisfaction is as much as 10%, this is due to the long waiting time of the patient. Obstetricians often perform cesarean section or delivery assistance in childbirth patients which coincides with the clinic schedule.

3.4.3 Emphaty Factors

In the empathy quality, there were 54 respondents who rated the quality of empathy as good with 51 people (94.4%) of them were satisfied, while the remaining 5.6% were less satisfied with the service. Furthermore, there were 12 people who rated the quality of empathy as not good with 75.0% of them feel dissatisfied and only 25.0% who were satisfied with the service. The results of analysis with chi square obtained p value of 0.001 ($p < \alpha$), which means that the quality of empathy variables is significantly related to the services of a specialist. The questionnaire results showed that the influence of empathy variables on specialist medical services on the patient satisfaction level is caused by patients feel care which includes explanation of the treatment to be carried out, an explanation of the drugs to be taken, an efforts to calm the patient's anxiety about his illness, concern for each patient's complaint, giving adequate service time, doctor's introduction to new patients, providing guidance / consultation about the disease and its prevention to patients, well communication with patients, listening to patient complaints with attention with a sense of willing to help. This shows that there are patients who have expressed good care for doctors and there are also patients who have not expressed good care for a doctor treatment. This can be seen in the empathy quality variable is not good but the level of patient satisfaction is as much as 25% satisfied.

3.4.4 Control Factors

In the Control quality, there were 57 respondents who were satisfied with the guidance, of which 94.7% were also satisfied with the service and only 5.3% were less satisfied with the service. Furthermore, there were 9 people (100 %) who rated dissatisfied with the quality of control with overall feel

dissatisfied with service. The results of the analysis with chi square obtained p value of 0.001 ($p < \alpha$), which means that control satisfaction variables are significantly related to the services of specialist doctors. The questionnaire results showed that the influence of the guided variable on the patient satisfaction level occurs because the patient feels satisfied with the ability to handle patient complaints in appropriately, the ability to provide an explanation of their illness, friendly and polite doctor's attitude, the speed in taking action, readiness to serve at any time.

3.4.5 Trust Factors

In the guided quality, there were 64 respondents who were satisfied with trust where 52, 81.2% of them were satisfied and 18.8% were not satisfied with the quality of service. Furthermore there are 2 respondents who are satisfied with the sense of trust with all of them feel dissatisfied with the quality of service. In the results of analysis with chi square obtained p value of 1,000 ($p > \alpha$), which means that trust has an insignificant relationship with patient satisfaction.

3.4.6 Self-disclosure Factors

In the self-disclosure quality, there were 62 respondents who were satisfied with self-disclosure where 80.6% of them were satisfied and 19.4% were dissatisfied with the service. Found 4 respondents who were dissatisfied with self-disclosure who also felt dissatisfied with the service. In the results of the analysis with chi square obtained p value of 1.090 ($p > \alpha$), by mean the self-disclosure satisfaction variable had an insignificant relationship to the satisfaction of specialist medical services.

3.4.7 Confirmation factors

In the confirmation quality, there were 56 respondents who were satisfied with the confirmation, of which 96.4% were also satisfied and 3.6% were dissatisfied with the service. Furthermore, there were 10 respondents who were dissatisfied with confirmation who also felt dissatisfied with the service. In the results of analysis with chi square obtained p value of 0.001 ($p < \alpha$), which means that the satisfaction confirmation variable had a significant relationship with the services. The questionnaire results showed that satisfaction confirmation is caused by the patient feel satisfied with the speed at which the doctor arrives in the room, satisfied with the delivery and request of patient's

approval for all given medical actions, honesty in providing information about the patient's condition, timeliness as promised to the patient, convenience to be found and contacted when patients need it.

Table 6: Bivariate Analysis.

	Patient Satisfaction Level				p-value
	Satisfy		Not Satisfy		
	n	%	n	%	
Tangibles					
Good	50	96.2	2	3.8	0.001
Not good	4	28.6	10	71.4	
Responsiveness					
Good	53	94.6	3	5.4	0.001
Not good	1	10	9	90	
Empathy					
Good	51	94.4	3	5.6	0.001
Not good	3	25	9	75	
Control					
Good	54	94.7	3	5.3	0.001
Not good	0	0	9	100	
Trust					
Good	52	81.2	12	18.8	1
Not good	2	100	0	0	
Self-disclosure					
Good	50	80.6	12	19.4	1.09
Not good	4	100	0	0	
Confirmation					
Good	54	96.4	2	3.6	0.001
Not good	0	0	10	100	

3.5 Multivariate Analysis

In multivariate analysis, what is involved is a variable that has a bivariate value of $p < 0.05$. From the bivariate test results, it is obtained that only the variable quality of tangibles, responsiveness, empathy, control satisfaction and confirmation can be performed multivariate analysis. The variables that have p values < 0.05 are considered influential in this multivariate model. Table 7 shows the final model of the influence of the variable quality of tangibles, responsiveness, empathy, control satisfaction and confirmation on the satisfaction of specialist doctors.

In Table 7, B is unstandardized beta, this value represents the slope of the line between the predictor variable and the dependent variable (BrownMath.com). SE is Standard Error (estimated parameter) of the standard deviation of its sampling distribution (Everitt, 2003). Wald is constraints on

statistical parameters based on the weighted distance between the unrestricted estimate and its hypothesized value under the null hypothesis, where the weight is the precision of the estimate (Fahrmeir, 2013; Ward, 2018). DF is degrees of freedom or the number of values in the final calculation of a statistic that are free to vary (Animated Software, 2008). The p-value is the probability of obtaining results as extreme as the observed results of a statistical hypothesis test, assuming that the null hypothesis is correct (Beers B, 2020). OR is Odd Ratio, the measure of the relationship between exposure and an outcome (Szumilas, 2010). The results show that all variables have p-value < 0.05 , so all independent variables significantly influence the dependent variable.

3.5.1 Quality of Tangibles

Based on the results of multivariate analysis with logistic regression obtained variable quality of tangibles significantly influence the services of specialist doctors with $p < 0.05$. Tangibles is the manifestation of services from doctors that can be felt directly by patients. The tangibles service includes a good appearance, friendliness to the patient, use of language that is easily understood, special attention to the patient, always checking the patient's condition, cleanliness, neatness, and uniform harmony in carrying out the task, providing polite service, always giving a smile to the patient, friendly, greet politely and want to help.

In the quality of tangibles, in providing services a specialist doctor must be polite, patient, friendly, not hesitant, attentive to sufferers, always provide help given, fostering good relations with nurses who handle patients, establishing good relations with patients and their families in order to arise the patient's trust in the doctor (Azwar A, 2010).

3.5.2 Quality of Responsiveness

Based on the results of multivariate analysis with logistic regression obtained responsiveness quality variables significantly influence the service of specialist doctors with $p < 0.05$. The dimension of responsiveness is the ability of doctors to help patients and their readiness to serve patients in providing services. Responsiveness services measured in this study include the speed of responding to the wishes of patients, giving responses and good answers to patients, delivering clear information. Based on the results of the analysis of the effect between the quality of responsiveness of

specialist doctor services with the level of patient satisfaction shows that there is an influence between the dimensions of doctor service responsiveness with the level of satisfaction. This means that the patient has a good perception that is if the specialist doctor is able to examine the patient immediately, be quick to provide treatment or action, be responsive to every patient's complaint, answer every question about the patient's disease clearly, take action according to the procedure, give the opportunity to ask the patient, speed services when patients need help, the ability to quickly respond to patient complaints, provide clear and easy to understand information, and always ask for patient complaints, then considered to have quality service (Muninjaya, 2011).

3.5.3 Quality of Emphaty

Based on the results of multivariate analysis with logistic regression obtained emphaty quality variables significantly influence the service of specialist doctors with $p < 0.05$. The results obtained are supported by the results of a study conducted by Tacoh (2013) about the relationship between doctor services and the level of patient satisfaction using the dimensions of service quality and other explanations so that the results obtained that respondents who care for good doctor's care by 87.5%. For health official services, the quality of health services is more related to the dimensions of staff care to meet patient needs, good communication, concerns and hospitality in serving, and / or healing patients' illnesses.

In the quality of empathy, the technical competence of specialist doctors or other health professions related to patients includes attention, care, and the effects of health service outcomes. Patients see quality health services as a health service that can meet perceived needs and be organized in a manner that is polite, timely, responsive and able to cure complaints and prevent the development or spread of disease (Azwar A, 2010).

3.5.4 Quality of Control

The results of multivariate analysis with logistic regression of control satisfaction variables obtained a significant relationship with the services of specialist doctors with $p < 0.05$. The doctor and patient communicate is a health communication form of interpersonal and complex. In evaluating communication control patterns between doctors and patients, they describe four basic forms of relationships, namely: standard, paternalistic, consumerist, and mutualistic. The standard relationship is characterized by a lack of control on

both sides (doctors and patients), and is far from ideal. The paternalistic form is characterized by the relationship of the dominant doctor while the patient is passive, whereas consumerism is associated with the opposite (focus on the rights and obligations of the doctor to the patient). Finally, the form of mutualistic relationships is characterized by sharing in decision making, and often suggests the best type of relationship to understand each other (Berry D, 2007). Creating a good interpersonal relationship is a prerequisite for medical services.

3.5.5 Quality of Confirmations

Multivariate analysis using logistic regression resulted that the satisfaction variable significantly influenced the service of specialist doctors with $p < 0.05$. Confirmation is the display of individual responses that indicate understanding and has been given. Confirmation is a kind of feedback that makes the process of interpersonal communication complete with the feedback aspect that communication has been understood and gives rise to an agreement in agreement with messages. Conversely, "confirmation" if the contents are not responded in accordance with what is ordered is an antagonist to the contents of the message. According to Northous and Northouse, Confirmation is information that is valued by sincere recognition of the quality of communication that has been developed between doctors and patients. Confirmation is a sincere appreciation for the benefits of information that has been given previously.

Table 7: Multivariate Final Model with Logistic Regression Analysis.

Variables	B	S.E	Wald	Df	P-value	OR
Quality of Tangibles	1.510	0.961	5.106	1	0.001	2.455
Quality of Responsiveness	2.511	0.413	4.210	1	0.001	4.573
Quality of Empathy	2.744	0.620	6.230	1	0.031	4.841
Control Satisfaction	1.876	0.305	5.847	1	0.012	3.970
Confirmation Satisfaction	1.777	0.285	7.900	1	0.001	3.656

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4 CONCLUSIONS

The examination results of each variable (i.e., Tangibles, responsiveness, empathy, control satisfaction, and confirmation satisfaction) to the regression coefficient (β) or OR values are all positive, which means that each variable has the opportunity to increase patient satisfaction with the a specialist doctor services about 2.455; 4.573; 4.841; 3.97; and 3.656 times higher when compared to the variables quality that is not good.

The results of the bivariate analysis showed good and satisfied results namely 96.2% for tangibles, 94.6% for responsiveness, 94.4% for empathy, 94.7% for control, 81.2% for trust, 80.6% for self-disclosure, and 96.4% for confirmation. While the results of multivariate analysis showed that there were only 5 variables that significantly affected patient satisfaction, namely the tangibles variable, responsiveness, confirmation with p -value=0.001, empathy (p -value=0.031), and control (p -value=0.012).

REFERENCES

- Agustin, N., Hernawati, S., Viphindartin, S., 2018. Effects of Service Quality on Word of Mouth through Satisfaction in Outpatient at Sakinah Islamic Hospital in Mojokerto Regency, *Heal. Notions*. 2(3): 311-315.
- Aliman, N.K., Mohamad, W.N., 2016. Linking Service Quality, Patients' Satisfaction and Behavioral Intentions: An investigation on Private Healthcare in Malaysia, *Elsevier Ltd*. 224: 141-148.
- Ariffin, F., Azraii, AB., Kamaruddin, KN., 2017. An assessment of patient waiting and consultation time in a primary healthcare clinic. *Malaysian Fam. Physician*

- Off, J. *Acad. Fam. Physicians Malaysia*, Malaysia. 12(1): 14-21.
- Aziati, A.H.N., Hamdan, N.S.B., 2018. Application of queuing theory model and simulation to patient flow at the outpatient department, *International Conference on Industrial Engineering and Operations Management*, 3016-3028.
- Azizam, NA., Shamsuddin, K., May-Jun., 2015. Healthcare Provider – Patient Communication: A Satisfaction Study in the Outpatient Clinic at Hospital Kuala Lumpur, *Malays J Med Sci*. 22(3): 56-64.
- Azwar A., 2010. *Pengantar Administrasi Kesehatan (Introduction to Health Administration)*, Binarupa Aksara, Tangerang.
- Azwar B., 2005. *Menjadi Pasien Cerdas (Terhindar dari Malpraktik) [Be a smart Patient (Avoid Malpractice)]*, Kawan Pustaka. Jakarta.
- Baequny A., 2009. Analisis Tingkat Kepuasan Peserta Askes Sosial PT. Askes Terhadap Pelayanan Dokter Keluarga di Kota Pekalongan Tahun 2009 (Analysis of the Satisfaction Level of PT. Askes 's social Askes Participants to the Service of Family Doctors in the city of Pekalongan in 2009), *University of Diponegoro*.
- Beers, B., P-Value Definition. <https://investopedia.com>. Updated on 19th February, 2020.
- Berry D., 2007. Health Communication: Theory and Practice. *McGraw-Hill Education*, New York.
- Chandra, S., Ward, P., Mohammadnezhad, M., July 2019. Factors Associated with Patient Satisfaction in Outpatient Department of Suva Sub-Divisional Health Centre, Fiji, 2018: A Mixed Method Study, *Frontiers in Public Health*. 7(183): 1-10.
- Dahlan., Sopyudin., 2011. *Statistik untuk Kedokteran dan Kesehatan (Statistics for Medicine and Health)*, Salemba Medika. Jakarta, 5th edition.
- David., Hariyanti, T., Widayanti, E., 2014. Hubungan Keterlambatan Kedatangan Dokter Terhadap Kepuasan Pasien di Instalasi Rawat Jalan (Relationship of Late Doctor's Arrival to Patient Satisfaction in Outpatient Installation), *J. Kedokteran Brawijaya*. 28 (1): 31-35.
- Depkes R.I., 2013. Kualitas Pelayanan terhadap Pasien Rawat Jalan (Quality of Care for Outpatients), diunduh pada tanggal 16 Agustus 2019 dari <http://www.google.com>
- Depkes R.I., 2014. Konsep Rumah Sakit (Hospital Concept), diunduh tanggal 16 Agustus 2019 dari <http://www.google.com>
- E, Gusti Sigar Maulana., Adhani, R., Heriyani, F., 2016. Faktor yang mempengaruhi kehilangan gigi pada usia 35-44 tahun di kecamatan juai kabupaten balangan (Factors Affecting Tooth Loss at the ages of 35-44 years in the District of Juai, Balangan Regency), *Dentino*. 1: 98-103.
- Everitt, B.S., 2003. *The Cambridge Dictionary of Statistics*. CUP. ISBN978-0-521-81099-9.
- Fahrmeir., Ludwig., Kneib., Thomas., Lang., Stefan., Marx., Brian., 2013. *Regression, Models, Methods and applications*. Berlin: *Springer*. 663. ISBN 978-3-642-34332-2.
- Ganasegeran, K., Perianayagam, W., Manaf, RA., Manaf, RA., Jadoo, SAA., 2015. Al-Dubai, SAR. Patient Satisfaction in Malaysia's Busiest Outpatient Medical Care, *The Scientific World Journal*. 1-6.
- Ghozali, Imam., 2016. *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 23 (Multivariate Analysis Application with the IBM SPSS 23 Program)*, Publishing by University of Diponegoro. Semarang, 8th edition.
- Glossary of Statistical Terms, Retrieved 21 August 2008. Degrees of Freedom. *Animated Software*.
- Hamdan, NS., Musa, H., Selamat, AS., Rashid, N., 2019. Investigating Factors of Service Quality Influencing Patient Satisfaction towards Patient Loyalty, *International Journal of Advanced Science and Technology*. 28(14): 452-459.
- Hanggraningrum, MD., Hariyanti, T., Rudijanto, A., 2017. The Effect of Service Quality on Outpatient Satisfaction of Dr. Soegiri General Hospital Lamongan, *JAM*. 15 (4): 643-649.
- Hassan, H., Rahman, MS., Sade, AB., 2015. Contemporary Healthcare Experience in Malaysia Hospitals, *J. Appl. Bus. Econ.*, 17(4): 89-94.
- Hastono, S.P., & Sabri, L., 2010. *Statistik Kesehatan (Health Statistics)*, Rajawali Pers. Jakarta.
- Hatibie, TWJ., Rattu, AJ., Pasiak, T., 2015. Analisis Faktor-Faktor yang Berhubungan dengan Kepuasan Pasien di Instalasi Rawat Jalan Bedah RSUP Prof. Dr. R. D. Kandou Manado (Analysis of Factors related to Patient Satisfaction in Outpatients Surgery of RSUP Prof. Dr. R. D. Kandou Manado), *J Public Health Science Unsrat* 5: 302-310.
- Kaban R., 2014. Pengaruh Komunikasi Dokter Terhadap Kepuasan Pasien di Rawat Inap Kelas III Rumah Sakit Umum Haji Medan Provinsi Sumatera Utara Tahun 2013 (Influence of Doctor Communication on Patient Satisfaction in Class III Inpatient at General Hospital Haji Medan in the Province of North Sumatra in 2013), *Helvetia Medan's High Health Sciences*.
- Kashkoli, SA., Zarei, E., Daneshkohan, A., Khodakarim, S., 2017. Hospital responsiveness and its effect on overall patient satisfaction: A cross-sectional study in Iran, *Int. J. Health Care Quality Assurance*. 30 (8): 728-736.
- Laeliyah, N., Subekti, H., 2017. Waktu Tunggu Pelayanan Rawat Jalan dengan Kepuasan Pasien terhadap Pelayanan di Rawat Jalan RSUD Kabupaten Indramayu (The Relationship between Waiting Time to Patient Satisfaction for Outpatient Services at Indramayu Regency Onshore General Hospital), *Jkesvo*. 1(2). 102-112.
- Liddy, C., Poulin, PA., Hunter, Z., Smyth, C., Keely, E., 2017. Patient Perspectives on wait times and the impact on their life: A waiting room survey in achronic pain clinic, *Scand. J. Pain.*, 17: 53-57.
- Lucas, A., Edwards, M., 2017. Development of Crisis Resource Management Skills: A Literature Review, *Clin. Simul. Nurs.*, 13 (8): 347 – 358.
- Mayasari, F., 2016. Analisis Hubungan Waktu Pelayanan dan Faktor Total Quality Service terhadap Kepuasan

- Pasien di Poliklinik Kebidanan dan Kandungan RSIA Anugerah Medical Centre Kota Metro Tahun 2015 (Analysis of the Relationship of Service Time and Total Quality Service Factors to Patient Satisfaction at the Midwifery and Obstetric Clinic RSIA Anugerah Medical Center Metro City in 2015), *Jurnal ARSI*. 214-230.
- Meesala, A., Paul, J., 2018. Service quality, consumer satisfaction and loyalty in hospitals: Thinking for the future, *J. Retail. Consum. Serv.* 40: 261-269.
- Muninjaya G., 2011. *Manajemen Kesehatan (Health Management)*. Jakarta, Medical Book Publisher EGC.
- Murtiana, E., Majid, R., Jufri, NN. Hubungan Mutu Pelayanan Kesehatan kepada Kepuasan Pasien BPJS di RSUD Kota Kendari Tahun 2016 (Relationship between The Quality of Health Services to BPJS Patient Satisfaction at the Kendari City General Hospital in 2016), *JIMKESMAS*. 1(4).
- Northouse LL, Northouse PG., 1998. *Health Communication—Strategies for Health Professionals*, Stamford: Appleton & Lange, 3rd edition.
- Notoatmodjo, S., 2018. Metodologi penelitian kesehatan (*Methodology of Health Research*), Publisher PT Rhineka Cipta. Jakarta, 3rd edition. 115-187.
- Parasuraman A, Zeithaml VA, Berry LL, 1994. Reassessment of Expectations as a Comparison Standard in Measuring Service Quality: Implications for Further Research, *J Mark.* 58: 111.
- Pathak, P., 2017. An Analysis of Outpatients' Perceived Service Quality and Satisfaction in Selected Private Hospitals of Kathmandu, *J. Business and Social Sciences Research (JBSSR)*. 2(1&2): 69-84.
- Pohan, IS., 2015. *Jaminan Mutu Layanan Kesehatan. Dasar-Dasar, Pengertian dan Penerapan (Health Service Quality Assurance. The Basics, Understanding and Application)*, Publisher EGC. Hal, 76-77, 143-150.
- Rensiner, Azwar, VY., Putra, AS., 2018. Analisa Faktor Kualitas Pelayanan Terhadap Kepuasan Pasien Rawat Jalan RSUD Dr.Acmad Darwis (Analysis of Service Quality Factors on Outpatient Satisfaction of Dr.Acmad Darwis Terrestrial General Hospital), *J Kesehatan Andalas*. 7: 1-8.
- Singh, B., Singhi, R., 2018. SERVQUAL impact on overall satisfaction and brand loyalty: An empirical study in Delhi-NCR hospital, *Int. J. Healthc. Technol. Manag.*, 17(1): 49-60.
- Stats without Tears Statistics Symbol Sheet. <https://brownmath.com> . 2018, 14 February.
- Suaib, Indar, Jafar, N., 2011. Pengaruh Kualitas Pelayanan Terhadap Kepuasan Pasien Di Ruang Rawat Inap Rsud Syekh Yusuf Kabupaten Gowa (The Effect of Service Quality on Patient Satisfaction in the Inpatient Room of the Sheik Yusuf Ash- Land General Hospital Gowa Districts), Universitas Hasanuddin. Makassar District, 2(4); 43-56.
- Sugiyono, 2017. *Statistika Untuk Penelitian (Statistics for Research)*, Publisher Alfabeta. 28th edition. 389 pages.
- Supartiningsih S., 2017. Kualitas Pelayanan dan Kepuasan Pasien Rumah Sakit: Kasus Pada Pasien Rawat Jalan. (Quality of Hospital Patient Satisfaction Services: Cases in Outpatients), *J Medicoeticolegal dan Manaj Rumah Sakit 1018196/JMMR* 2016. 6 (1): 9–15.
- Szumilas, M., 2010. Explaining Odds Ratios, *J Can Child Adolesc Psychiatry*. 19(3): 227-229.
- Tacoh, T.S., Pangemanan, J.M., Rumampuk, J.F., 2013. Hubungan Antara Pelayanan Dokter Dengan Kepuasan Pasien Di Instalasi Rawat Inap A Badan Layanan Umum Rumah Sakit Umum Pusat Prof. DR. R.D. Kandou Kota Manado (The Relationship between Doctor's Service and Patient Satisfaction in the Inpatient Ward A Public Service Agency Central General Hospital Prof. Dr.D.R. Kandou, Manado City), Universitas Sam Ratulangi Manado, *Epub*
- Turnip, A., Andrian, Turnip, M., Dharma, A., Paninsari, D., Nababan, T., Ginting, C.N., 2020. *An application of modified filter algorithm fetal electrocardiogram signals with various subjects*, International Journal of Artificial Intelligence, vol. 18, no., 2020.
- Wijaya, C., Andrian, M., Harahap, M., Turnip, A., 2019. *Abnormalities State Detection from P-Wave, QRS Complex, and T-Wave in Noisy ECG*, Journal of Physics: Conference Series, Volume 1230, (2019) 012015. doi:10.1088/1742-6596/1230/1/012015.