#### **ORIGINAL ARTICLE:**

# Analysis of maternity patients' satisfactory to maternity room installment in Dr. Soetomo Hospital Surabaya

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#### **ABSTRACT**

**Objectives:** To analyze the maternity patient satisfaction for services provided in the maternity room of Dr Soetomo General Hospital Surabaya.

Materials and Methods: Cross-sectional observational studies. In this study only made observation without intervention. The data used in this study was obtained using form of questionnaires, using Likert Scale. The data is processed by using program SPSS v20 and Microsoft Excell 2007 program

Results: During October - December 2017, based on importance performance analysis patient satisfaction divided into 4 quadrant (quadran A,B,C and D), quadrant A is a top priority for service quality improvement. Percentage of performance level nurse or doctor willing to help patient is 52,4%. Percentage of performance level nurse or doctor to inform when the service will be given is 59,9%. Percentage of performance level to keep patient as top priority is 70,3%. Percentage of performance level to look carefully to asptient is 87%. Percentage of performance level to respond patient requet immediately is 90. Based on custumer satisfaction index (CSI) the index score of patient satisfaction is 74,3%, which is that value describes the overall patient in the maternity installation is satisfied with the health service provided.

Conclusion: Patient of maternity room at Dr. Soetomo General Hospital is generally satisfied with the current quality of service performace. The value of patient satisfaction showed a value of 74,53% which means almost 75% of patient expectations is fulfilled and the remaining about 25% still need improvement. The particular concern in improvement of service is desire to always help patient, provide information about the treatment, patient always to be top priority, and raising individual attention to the patient.

**Keywords:** Analysis of custumer satisfaction, quality and health services, quality of service, service user satisfaction, service quality, Dr Soetomo General Hospital Surabaya.

#### **ABSTRAK**

Tujuan: Untuk menganalisis kepuasan pasien bersalin atas pelayanan yang diberikan di Kamar Bersalin RSUD Dr. Soetomo. Bahan dan Metode: Studi observasional secara cross-sectional. Dalam penelitian ini hanya melakukan pengamatan saja tanpa intervensi. Data yang digunakan dalam penelitian ini diperoleh menggunakan instrumen penelitian berupa kuesioner, menggunakan skala Likert. Kemudian data diolah dengan menggunakan program SPSS v20 dan program Microsoft Excell 2007. Hasil: Selama Oktober - Desember 2017, berdasarkan Importance Performance Analysis kepuasan pasien index kepuasan pasien dibagi menjadi 4 kuadran (kuadrant A, B, C dan D) dimana kuadran A merupakan prioritas utama untuk perbaikan kualitas pelayanan yang ada. Presentase tingkat kinerja perawat atau dokter selalu berkeinginan membantu pasien 52,4%. Presentase tingkat kinerja perawat atau dokter memberitahukan kapan pelayanan akan diberikan sebesar 59,9%. Presentase tingkat kinerja menempatkan pasien sebagai prioritas sebesar 70,3%. Presentase tingkat kinerja dalam memperhatikan individu pasien sebesar 87%. Tingkat kinerja dalam merespon permintaan pasien dengan segera sebesar 90%. Dan berdasarkan Costumer Satisfaction Index (CSI) nilai index kepuasan pasien sebesar 74,3% dimana nilai tersebut menggambarkan secara keseluruhan pasien di instalasi kamar bersalin di RSUD Dr. Soetomo puas terhadap pelayanan yang diberikan.

Simpulan: Pasien instalasi kamar bersalin di RSUD Dr. Soetomo secara umum puas terhadap kinerja kualitas pelayanan saat ini. Nilai kepuasan pasien menunjukkan nilai 74,53% yang berarti hampir 75% harapan pasien dapat terpenuhi dan sisanya sekitar 25% masih perlu perbaikan. Hal yang menjadi perhatian khusus dalam perbaikan pelayanan di kamar bersalin antara lain keinginan dokter/perawat untuk membantu pasien, dan memberikan informasi tentang perawatan dan yang akan diberikan, pasien ingin selalu diutamakan dalam memberikan respon pelayanan dan meningkatkan perhatian secara individual terhadap pasien.

**Kata kunci:** Analisa kepuasan konsumen, Mutu dan pelayanan kesehatan, Kepuasan pengguna jasa, RSUD Dr. Soetomo

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#### INTRODUCTION

Hospital is one of the institutions engaged in the field of health service, the function of hospital is now increasing towards comprehensive and integrated health services along with the development of science and technology. Thereby the fate of hospital in the future depends on its ability to respond to the needs of patients through quality service.

Health services quality according to the Institute of Medicine (IOM) is a step towards improving health services for both individual and the population in accordance to the expected health outcomes along with the latest professional knowledge. The quality of health services is closely related to patients' satisfaction (client satisfaction). 1,5 In order to maintain the quality of health services in Indonesia as mentioned in Undang-undang (UU) Kesehatan nomor 36/2009 which states that the government is given the responsibility to provide safe, good and affordable health services for the public. Likewise with the Hospital Law or UU Rumah Sakit nomor 44/2009 which explicitly states that the quality of service and patient safety is the fundament and objective of hospitals. Nowadays, the quality of health services is entering the era of patient safety as its main focus. Unsafe health services with bad quality will increase the morbidity and mortality as well as financial burden for the health system and the community.<sup>2,7</sup>

Hospital management must know what the patients want and need, that being the case it is necessary to get patients' suggestion about their desired services. This will help the hospital management greatly to describe and realize it to the dimensions of service quality.<sup>2,12</sup>

Dr. Soetomo Hospital Surabaya is type A hospital in the East Java province and also one of the referral hospital of eastern Indonesia that has maternal and perinatal care, especially for patients in the maternal and perinatal installation room which receives not only patients who are currently being treated but also those who need a fast, precise and skilled childbirth assistance. One of Dr. Soetomo Hospital, Surabaya missions is to provide health services and service networks as a Tertiary Referral Hospitals which are safe, high in quality and affordable. Maternal and perinatal installation at Dr. Soetomo Hospital is expected to be able to provide excellent service according to the standard so that patients' satisfaction level will be high and thus will help reducing the maternal mortality rate.

This study attempts to measure the satisfactory level of obstetric patients who received services at the maternal and perinatal installation at Dr. Soetomo Hospital using

the "Importance and Performance Analysis" and "Customer Satisfaction Index" methods. By measuring the level of importance according to patients' perception and the level of performance affected by influence of the five dimensions of service quality which are tangibles, reliability, responsiveness, assurance, and empathy.

#### **MATERIALS AND METHODS**

This study was an observational study with crosssectional design. This study only conducted observations without any intervention. The population in this study were patients who had given birth and received maternal and perinatal care at the Maternal and Perinatal Installation of Dr. Soetomo Hospital in October -December 2017. Inclusion criteria included patients who gave birth to babies who lives at the Maternal and Perinatal Installation of Dr. Soetomo Hospital. The sample of this study was 100 respondents whom was chosen using simple random sampling. The data used in this study was obtained using a research instrument in the form of a questionnaire which was elaborated using the five dimensions of service quality that consisted of tangibles, reliability, responsiveness, assurance, and empathy. Likert scale was also used to obtain the data. Those data was processed using SPSS v20 and Microsoft Excel 2007 program.

# **RESULTS**

The level of importance shows the weight of the patient's assessment of the expected service quality attributes. Every patient who receive treatment and service in the maternity room of Dr. Soetomo Hospital, Surabaya have hope for the services received. Patient's assessment of how important an attribute is to the satisfaction of the service received will provide important information to the process of setting hospital services priorities and improving the quality of the current services.

The assessment of the importance of quality service in this study used 5 scales or 5 interval classes. Scale 1 (interval 1 - 1.8) was categorized as very unimportant, scale 2 (interval> 1.8 - 2.6) as less important, scale 3 (interval> 2.6 - 3.4) as neutral, scale 4 (interval> 3.4 - 4.2) as important and scale 5 (interval> 4.2-5) as very important. Table 1 below presents the results of the mean value for each service quality attribute based on the level of importance according to the patients in Dr. Soetomo Hospital, Surabaya.

Table 1. Level of importance of quality service attributes in maternity room of Dr. Soetomo Hospital, Surabaya

Dimension	Item	Description	Average
Tangibles	P1	The maternity room has the latest equipments and technologies	3.21
	P2	Facilities in the maternity room are attractive to patients' eye	4.00
	P3	Doctors and nurses in the maternity room dress nicely and look neat	2.78
	P4	Physical facilities in maternity room are suitable to the services provided	4.21
Reliability	P5	When doctors or nurses promise something, they keep the promise in time	
	P6	When patients have problems, doctors and nurses are quick to help	4.39
	P7	The maternity room is reliable	4.24
	P8	The maternity room provides services as how it is promised in the first place	4.05
	P9	The maternity room has a thorough record	3.34
Responsiveness	P10	Doctors/nurses tell the patient when the service is provided	3.67
	P11	It is understandable for patients to expect an immediate service from doctors/nurses	2.11
	P12	Doctors/nurses always want to help the patients	3.89
	P13	Doctors/nurses are not too busy to respond to patients' requests immediately	3.70
Assurance	P14	Patients can put their faith in doctors/nurses	
	P15	Patients feel safe being examined by the doctors/nurses	4.33
	P16	Doctors/nurses are being polite to the patients	4.37
	P17	Doctors/nurses get enough support from the hospital management	2.83
Empathy	P18	Doctors/nurses give individual attention to the patients	3.84
	P19	Doctors/nurses give personal/private attention to the patients	2.75
	P20	Doctors/nurses are able to understand patients' needs	2.45
	P21	Doctors/nurses are able to put patients as their top priorities	3.97
	P22	Doctors/nurses have a comfortable work hours for the patients	2.14
		Total of average level of importance	3.58

The results of the analysis of the four items in the tangibles dimension found that 1 item was considered "very important", 1 other item was declared "important", and 2 was included in "neutral" category. The tangibles factor that was considered very important for patients with an average level of importance of 4.21 was the suitability of the physical facilities of the maternity room with the service provided. Physical facilities that suited the required services were very important for the patients to ensure the quality of service and satisfaction. Meanwhile, the attribute which was still considered important by the patient was P2 with an average level of importance 4.00, this item showed the patient's wish and expectation of attractive facilities, thereby supporting the quality of services. Two other factors, P1 and P2, which were related to the renewal of equipment and the neatness of clothing worn by doctors and nurses, was assessed as neutral in the category of importance.

As shown in table 1, the dimension of reliability in the quality of service in maternity rooms at Dr. Soetomo Hospital was generally perceived as important by patients. Two attributes in reliability category had average scores that was considered "very important", those attributes were P6 and P7. These two described the ability of doctors and nurses to help patients when they experienced problems and level of reliability of the maternity room. The mean score of the two attributes were between 4.2 to 5.0 thus making these two considered very important aspects in service. In addition, two other factors indicated as "important" which meant that these factors were still considered as priorities in patients' perception, those two factors were P5 and P8. P5 and P8 described the ability of the staffs and the services in maternity room installation to fulfill the initial promises to the patients, mean score for P5 was 4.14 and P8 was 4.05. The last attribute of the reliability dimension was P9, which was an attribute that describes the reliability of services related to the completeness of patient records with a mean value of 3.34, meaning this attributes was considered "neutral" in the category of importance level.

The next dimension in the table was responsiveness which generally had level of importance for patients categorized in the "important" group. Three attributes in this dimension, namely P10, P12 and P13, which were described as the responsiveness of hospital staffs during providing services, their desire to help patients and the possibility of the staffs to respond to patients' requests immediately had mean attributes value within the scale of 3.4 to 4.2, thereby these attributes were defined as "important" attributes to the patients in terms of services satisfaction. The remaining item, P11, showed an average score of 2.11 thus being included in the category of "less important" attribute. The low level of importance of the P11 factor was because patients were well-aware that hospital staffs at Dr. Soetomo Hopital, whether doctors or nurses, handled quite a lot of patients in the maternity hospital installation therefore patients could not expect on the staffs' ability to immediately put one patient ahead of others.

Assurance aspect in the maternity room installation at Dr. Soetomo Hospital Surabaya based on the table above was generally rated very highly by the patients. This could be seen from the average score of level of importance of this attribute that was considered "very important". Three of the 4 items in assurance dimension had mean score at intervals of 4.2 to 5, namely P14, P15, and P16. These items was described as attributes to assurance dimension such as patients could trust the hospital staffs, the guarantee on safety, and guarantee on polite treatment by the staffs. Meanwhile P17, which was related to support by the hospital management for doctors and nurses, was considered "neutral" by patients with a mean score of 2.83. In the patients' eye, management and hospital staffs were one team, thus they should support each other.

The empathy dimension showed varying degrees of importance. Some items were indicated as "important" while others were indicated as "less important". Items P18 and P21 which measured the importance of individual attention given by the hospital staffs towards patients and putting patients as top priority, were indicated as "important" in the level of importance with average scores of 3.84 and 3.97. Meanwhile personal empathy (P19) was indicated as "neutral" in the level of importance with mean score of 2.75. The remaining two items, empathy for the patients' needs (P21) and empathy in the form of comfortable working hours for the patients (P22), showed "less important" ratings with scores of 2.45 and 2.14 respectively. Overall the score of level of importance in service quality attribute showed a value of 3.58. This score was included on a scale interval of 2.6 to 3.4 which meant that it was categorized in "important" level.

Assessment of service performance at maternity room of Dr. Soetomo Hospital Surabaya was based on 22 items of service quality attributes and used 5 scales as previously mentioned. According to the results of the descriptive statistics in table 2, patients' assessment of the quality of service in maternity room at Dr. Soetomo Hospital on the tangibles dimension generally showed performance. Two out of 4 items in tangibles dimension showed "very good" performance and the other two showed "good" performance. The items with very good performance were dressing neatly (P3) and the suitability of facilities with service type (P4), each had average scores of 4.30 and 4.32. Meanwhile, two other factors namely P1 and P2 with mean performance scores of 4.06 and 3.76 respectively showed "good" performance according to patients' assessment.

The second dimension of service quality was reliability which consisted of 4 attributes, all of which were concluded as "very good" in rating. All of the items starting from P5 through P9 have mean value of performance level on the 5th interval scale which had intervals of 4.2 to 5, meaning that the level of reliability of the maternity room were considered very good in the perspective of patients.

Compared to the previous two dimensions, service quality performance based on responsiveness dimension still showed weakness in service quality. Four attributes were used to measure the responsiveness of services, 3 of which indicated as "not good" with the average value between the intervals of 1.8 to 2.4. While the item that showed a quite positive rating were P13 with a mean value of 3.33, meaning that it was considered as "neutral" or moderate in performance.

In contrast to the dimensions of service responsiveness, the assurance dimension or the ability of staffs or agencies studied in ensuring service quality, showed positive results. All assurance items had scores above 4, which 3 items of service quality attributes were on the "very good" performance rating scale, namely P15, P16 and P17. These three items described service guarantees based on ability to guarantee feeling of security, polite behavior and management support for the available staffs. While item P1 that measured service performance according to the guarantee for the patients to be able to trust the staffs was considered "good" with an average rating of 4.12.

Assessment of service quality according to the empathy dimension generally showed neutral performance. Four items of service empathy that measured the extent to

which individual attention to the patient could be given (P18), personal attention to the patient (P19), the ability to place the patients as priority (P21) and comfortable working hours for patients (P22) have mean value at the intervals of 2.6 to 3.4, meaning that generally patients considered these items to the category of neutral or moderate in performance. Meanwhile P20 that described the ability of the staffs such as nurses or doctors in providing services to patients in the maternity rooms at Dr. Soetomo Hospital Surabaya, showed a "not good" rating with average score of 2.39 (at the interval scale of 1.8 to 2.6). Overall service quality performance shown by the total average of the performance evaluation was 3.64, thereby it can be concluded that generally the services in the maternity room installation of Dr. Soetomo Hospital, Surabaya showed "good" performance as assessed by patients.

#### **DISCUSSION**

# Analysis of the level of appropriateness of the service quality attributes of the maternity room installation at Dr. Soetomo Hospital Surabaya

Analysis of the suitability level reflects the ratio of the importance level of service quality attributes to the level of performance in the maternity room installation at the Dr. Soetomo Hospital Surabaya. This comparison can be used by hospital management to make priority scale for the service attributes. In addition, comparing the level of

performance with the level of importance will obtain us the evaluation of the satisfaction felt by the patients so far. The level of conformity below 100% can be interpreted that the attributes of the level of importance are far greater than the performance of service received by the patients, therefore patients' satisfactory level will be lower, on the contrary if suitability level is above 100%, it can be interpreted that the performance of service given to the patients has higher score compared to the score of the attributes of level of importance.

The analysis result as seen in table 3 showed that several service quality attributes in maternity room installation at Dr. Soetomo Hospital Surabaya still showed low conformity ratio, thereby evaluation and improvement were needed. There are 10 attribute items that had conformity ratio below 100% therefore the level of patient satisfactory was not optimal. Thereof in order to guarantee service quality and increase patients' satisfaction with the services provided, attributes that had ratio below 100% must became hospital management's concern to be evaluated and improved. In the first and second priorities were two attribute items of responsiveness dimension, those were P12 with conformity ratio of 52% and P10 with ratio of 59.9%. P12 was an attribute of staffs' responsiveness related to their desire to help patients. The suitability level of these attribute showed a value of 52% which meant that the service performance only reached 52% of its expectation.

Table 2. Level of service performance in maternal room installation of Dr.Soetomo Hospital, Surabaya

Indicator	Item	Description	Average	
Tangibles	P1	The maternity room has the latest equipments and technologies	4.06	
-	P2	Facilities in the maternity room are attractive to patients' eye	3.76	
	P3	Doctors and nurses in the maternity room dress nicely and look neat	4.30	
	P4	Physical facilities in maternity room are suitable to the services provided	4.32	
Reliability	P5	When doctors or nurses promise something, they keep the promise in time	4.39	
	P6	When patients have problems, doctors and nurses are quick to help	4.61	
	P7	The maternity room is reliable	4.57	
	P8	The maternity room provides services as how it is promised in the first place	4.23	
	P9	The maternity room has a complete medical record	4.51	
Responsiveness	P10	Doctors/nurses tell the patient when the service is provided	2.20	
	P11	It is understandable for patients to expect an immediate service from doctors/nurses	1.97	
	P12	Doctors/nurses always want to help the patients	2.04	
	P13	Doctors/nurses are not too busy to respond to patients' requests immediately	3.33	
Assurance	P14	Patients can put their faith in doctors/nurses	4.12	
	P15	Patients feel safe being examined by the doctors/nurses	4.51	
	P16	Doctors/nurses are being polite to the patients	4.21	
	P17	Doctors/nurses get enough support from the hospital management	4.50	
Empathy	P18	Doctors/nurses give individual attention to the patients	3.34	
. ,	P19	Doctors/nurses give personal/private attention to the patients	3.10	
	P20	Doctors/nurses are able to understand patients' needs	2.39	
	P21	Doctors/nurses are able to put patients as their top priorities	2.79	
	P22	Doctors/nurses have a comfortable work hours for the patients	2.80	
		Average level of service performance	1.64	

Meanwhile P10 was related to the responsiveness of the staffs to notify patients when the service was provided, the performance of this attribute that met patients' expectation was only 59.9%. Besides these two items, other responsiveness dimension's items also rank 5th and 6th priorities that needed to be evaluated, these two items were P13 with a conformity ratio value of 90% and P11 with a ratio of 93.4%. The empathy dimension also had two attribute items that should be a concern for improving service quality. P21 was related to the ability of the staffs to put patients as priority ranked third on the fulfillment of service performance over new patients' expectations which had a ratio of 70.3%. Empathy in the form of staffs' individual attention to patients (P18) also occupied the 4<sup>th</sup> place for the management's priority to improve service quality in maternity room at Dr. Soetomo Hospital because the conformity ratio had only been met about 87% of the importance level. In addition to these two items, the empathy attribute items were also at the 10<sup>th</sup> place for service improvement priority because the level of conformity was not optimal. The attribute was P20 which described the ability of hospital staffs to understand patients' needs.

Three other items that were ranked as top priorities for service quality improvement were 1 attribute from the tangibles dimension and 2 attributes from the assurance dimension. Item P2, which was an attribute of tangibles dimension, had 94% conformity level, this meant that the physical attractiveness of the maternity room was not optimal as how patients expected. Two other items were part of the service assurance dimension, those items were P16 which measures the politeness of the staffs while treating the patients and P14 about guaranteeing that patients can put their faith in the hospital staffs. These two also needed to be improved. The suitability level showed a value below 100% which meant that the service performance was still below the desired expectations of the patients.

The remaining 12 attributes indicated value of conformity level above 100%, this meant that the service provided to the patients was perceived as good enough or even exceeds their expectation. The highest conformity ratio was achieved by attribute P17 which showed management support for staffs at maternity room so far, with the ratio between performance and importance reaching 159%. In addition to the service assurance, dimension of physical facilities as well as service reliability also showed high achievement as seen in P3 and P9. P3 attribute, which described the staffs' appearance and the way they dressed while working, had a conformity ratio up to 154.7%. Meanwhile P9 attribute that described administrative performance shown as complete patient records also received a high ratio of 135%.

#### Importance and Performance Analysis (IPA)

As an approach to importance and performance analysis, data visualization was done using scatter plot graphs between the data of importance and service performance. This qualitative-quantitative approach divided the distribution of visualization of these data into 4 quadrants which could be used by the installation manager to evaluate and establish appropriate policies in order to improve the quality of service in the maternity room installation at Dr. Soetomo Hospital Surabaya.

The four quadrants were quadrant A, B, C and D. Quadrant A was a quadrant which contained main priorities for service quality improvement. Attributes that fell into the category of quadrant A were those which had weight of importance above the average level of overall importance, thus these attributes could be sorted to important to very important category. On the contrary in terms of performance, the attributes in quadrant A had bad service performance because these attributes had value below the average of all service quality attributes. Attributes with bad performance on one hand, but very high level of importance on other hand showed that these attributes must be the main concern for the manager of maternity room installation service.

In quadrant B, the characteristic of attributes showed harmony between the level of importance or patients' expectation with the level of performance. Both the level of importance and performance were equally high in this quadrant. The value was above the average of all attributes, thus attributes in this quadrant had shown optimal service quality because it was able to provide satisfaction to patients. Thereby, these attributes needed to be maintained by the manager to maintain the quality of service provided in the maternity room.

Quadrant C was a quadrant that could be perceived as a low priority quadrant. The characteristic of this quadrant was that the attributes had low importance according to the patients, while the level of performance was also perceived as not high. Low patient expectation made these attributes to not be main priority in improving the quality of service.

In addition to the three quadrants, the last quadrant was quadrant D which was considered as excessive. Attributes at this quadrant had high level of performance however according to patient expectations, these attributes were not considered important. Therefore, these attributes that had high performance value was considered excessive to patients' satisfaction.

Table 3. Priority sorted using level of conformity of service quality attributes I maternity room at Dr. Soetomo Hospital, Surabaya

Priority number	Dimension	Item	Description	X	Y	%
1	Responsiveness	P12	Doctors/nurses always want to help the patients	389	204	52.4
2	Responsiveness	P10	Doctors/nurses tell the patient when the service is provided	367	220	59.9
3	Empathy	P21	Doctors/nurses are able to put patients as their top priorities	397	279	70.3
4	Empathy	P18	Doctors/nurses give individual attention to the patients	384	334	87.0
5	Responsiveness	P13	Doctors/nurses are not too busy to respond to patients' requests immediately	370	333	90.0
6	Responsiveness	P11	It is understandable for patients to expect an immediate service from doctors/nurses	211	197	93.4
7	Tangibles	P2	Facilities in the maternity room are attractive to patients' eye	4.00	3.76	94.0
8	Assurance	P16	Doctors/nurses are being polite to the patients	4.37	4.21	96.3
9	Assurance	P14	Patients can put their faith in doctors/nurses	4.25	4.12	96.9
10	Empathy	P20	Doctors/nurses are able to understand patients' needs	2.45	2.39	97.6
11	Tangibles	P4	Physical facilities in maternity room are suitable to the services provided	4.21	4.32	102.6
12	Assurance	P15	Patients feel safe being examined by the doctors/nurses	4.33	4.51	104.2
13	Reliability	P8	The maternity room provides services as how it is promised in the first place	4.05	4.23	104.4
14	Reliability	P6	When patients have problems, doctors and nurses are quick to help	4.39	4.61	105.0
15	Reliability	P5	When doctors or nurses promise something, they keep the promise in time	4.14	4.39	106.0
16	Reliability	P7	The maternity room is reliable	4.24	4.57	107.8

Note: X = Level of importance of service quality attributes, Y = Level of performance of service quality attributes,

<sup>%</sup> = Percentage ratio of conformity between Y and X.

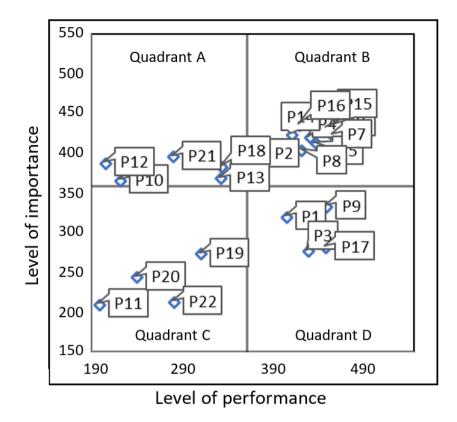


Figure 1. Quadrants of level of importance and performance of the attributes of service quality of maternity room at Dr. Soetomo Hospital Surabaya.

Based on the distribution of data in the cartesian diagram shown in Figure 1, it can be explained that these attributes could be categorized into top priority, low priority, need to be maintained and need to be ignored, the categorization was as follows:

### Top priority - Quadrant A

Service quality attributes included in quadrant A were those that had level of importance above average which was 358. As classified in a range of scales, values of importance ranging from 340 to 419 were interpreted as "important" and above those value were interpreted as "very Important".

In the aspect of performance assessment, quadrant A was below the average value of the overall level of performance attributes. Based on the IPA calculation, the average overall performance was 364, which fell in the range of 340-419, meaning that those value could be interpreted as "agree". Thus, the performance of quadrant A was interpreted as below the "agree" range or performance of attributes were identified as low.

The following attributes of service quality were the top priorities:

#### P12: Doctors/nurses always want to help the patients

P12 was an attribute that measured level of service quality of the staffs in assisting patients, this attribute was included in quadrant A with the lowest value of performance level, which was 204. This value was in the range of "poor" in performance scale. On the other hand, the total P12 attribute score was very high based on patients expectation, reaching 389. Thereby the position of P12 in the Cartesian diagram was above the average level of importance. The level of importance score indicated that this attribute was considered as "important" based on patients' expectation.

Attribute was considered as "important" due to value of level of importance above average, while in the realization still not supported enough by good performance. This reflected that the management of services in the maternity room still lacked in implementing service responsiveness that shaped work culture which was important in creating the character of staffs to always want to help patients. The low performance compared to other attributes in quadrant A meant that manager of the maternity room must prioritize the formation of responsiveness in the attitude of staffs in helping patients with difficulties.

P10: Doctors/nurses tell the patient when the service is provided

P10 was attribute of service quality based on the dimension of responsiveness. The score of importance level of this attribute was 367 thereby considered as an "important" attribute for patients while receiving services in the hospital maternity room installation at Dr. Soetomo Hospital, Surabaya. High level of importance of this attribute as expected by patients at that time was not yet matched by adequate service performance. The value of service performance score of this attribute was only 220 or was at the level of "poor". Thus, the manager of the maternity room installation must place this attribute as a top priority for immediate performance improvement, therefore encouraging significant improvement in the quality of maternity room installation services.

P21: Doctors/nurses are able to put patients as their top priorities

Among the service quality attributes in quadrant A, P21 had the highest importance score, which was 397. This attribute item was part of the empathy dimension. However the service performance was included in the low category, with performance level score of only 297 or categorized as "neutral" or ordinary.

The difference between result of the level of importance with the level of performance in this attribute showed that the management of maternity room installation services needed to evaluate the attitude and action of current staffs in serving patients. The management must immediately create a policy that can increase the awareness of staffs to place patients as priority service at work. Empathy of the staffs should be improved so that the quality of service increases.

P13: Doctors/nurses are not too busy to respond to patients' requests immediately

The index score for the importance level of P13 showed a value of 370 or categorized as "important", while the service performance index only reached 333 and was still in the overall attribute value of 363. This showed that there was gap between expectation and the importance level of quality attributes services with the performance received by patients. The low performance score reflected that staffs were still too busy thus many patient requests were ignored. In order to improve the quality of maternity room installation services, this attribute must also be a top priority for improvement.

P18: Doctors/nurses give individual attention to the patients

The performance of attribute regarding staffs' empathy to give individual attention to patients was also low. The attribute scored 334 for performance while the importance scored 384. This indicated that there was gap between the importance of the empathy attribute and the service performance received by the patient.

# Maintain performance - Quadrant B

Quadrant B reflected optimal condition of service quality because it showed conformity between the level of importance and service performance. On one hand, patient's expectation of service quality attributes in this quadrant were considered very important, while the service performance provided was able to meet the patients' expectation. High performance made the level of satisfaction also high, therefore the manager of the maternity room installation was required to maintain the performance in the attributes included in this quadrant. The service quality attributes included in quadrant B include:

P2: Facilities in the maternity room are attractive to patients' eye

P2 was included as an attribute of service quality based on tangibles dimension which was dimension for service quality attributes judged from the physical appearance that could be directly felt and seen by consumers. Item P2 measured the level of attractiveness of the maternity room in patients' perception. Based on the index score of performance 376 and the index score of importance 400 it is concluded that both were above the average of level of performance and the level of importance of attributes, meaning that this tangibles attribute performance must be maintained.

P14: Patients can put their faith in doctors/nurses

P14 was an item from the assurance dimension. This attribute item reflected the ability of hospital management to provide patients with trustable staffs. Based on the range of scales, the importance value of this attribute fell into the "very important" category with a score of 425 while the performance level was indicated as "good". This evaluation result showed that service personnel in the maternity room were able to be trusted by patients, while seen from the performance, expectations in the form of importance level had been supported by good performance by the staffs in the maternity room installation. This high performance must be maintained both by the manager and by staffs who work in the maternity room.

P16: Doctors/nurses are being polite to the patients

The ability of manager to provide both nurses and doctors who acted politely to patients also showed a positive achievement. P16, which was an attribute of the assurance dimension in service quality, had a very good performance score of 421. This high performance had been able to satisfy patients' expectation, which considered that this attribute was very important in guaranteeing quality of service. The importance score of this attribute reached 437 which meant that it was included in the "very important" scale interval.

P8: The maternity room provides services as how it is promised in the first place

The high level of importance in the attribute of the manager's ability to provide services in accordance with what was promised was also supported by high performance performance on the reliability of these attributes. The importance index score of 405 that falls in the "important" interval is offset at the same time as the high performance index score of 423 or in the "very good" level. This achievement must be maintained by the manager to ensure service reliability.

P4: Physical facilities in maternity room are suitable to the services provided

The P4 attributes of the tangibles dimension which described maternity room physical facilities that were in accordance with the types of services provided also showed high achievements and should be maintained. The total performance score for this attribute was 432 or included in the "very good" category. This high performance showed that the management of the maternity room installation had been fulfilling the expectation of patients who saw this factor as a very important service attribute.

P5: When doctors or nurses promise something, they keep the promise in time

Manager of the maternity room in the hospital. Dr. Soetomo is now able to provide reliable services related to the ability of officers to keep promises to patients so far. Patients' expectations of this attribute are included in the "important" category with a total score index of 414 while their performance scores also showed a significantly higher performance of "very high" with a value of 439.

P15: Patients feel safe being examined by the doctors/nurses

The ability of manager to provide quality services as described in P15 which was about guaranteeing the feeling of safety for patients while receiving treatment

from the hospital staffs was also worth maintaining. High patient expectation for this attribute, with index score of 433, was supported by optimal level of service performance with a score of 451.

#### P7: The maternity room is reliable

The current manager also showed a good service performance by showing the ability to provide reliable services in maternity room. Item attribute P7 which measured the quality of reliability of service in the maternity room showed a harmony between the level of importance with service performance. The importance level of the attribute showed a value of 424 while the service performance received a value of 457. The manager of the maternity room installation was able to meet patients' expectations by presenting optimal performance in the service of this attribute.

P6: When patients have problems, doctors and nurses are quick to help

This attribute is an attribute that has the highest score index both in terms of the importance of attributes and in terms of performance. The importance of the attribute reaches a value of 439 or is at the level as an attribute that is "very important" in patient expectations, while the performance of services perceived by patients reaches a score of 461 which means "very good".

# Low priority - Quadrant C

Quadrant C was a quadrant with attributes below the average both in term of importance and performance. The low level of importance perceived by the patients in these attributes showed that the manager did not need to prioritize these attributes because even though these attributes had high performance level, the impact on patients' satisfaction was not significant.

P11: It is understandable for patients to expect an immediate service from doctors/nurses

Patients were generally aware that both nurses and doctors treated many patients in the hospital, therefore expectation on this attribute was very low or even seen as less important. The importance score of this attribute showed a value of 211 or categorized as "less important", while the achievement of service performance was also aligned with the level of importance, which was "not good" with a score of 197. Comparing the value of importance with performance showed that there was still a difference between the two, showing that this attribute still needed improvement to exceed patients' expectation. However, improvements made to this attribute must be

made when the priority of improvements in the quadrant had already shown progressive results.

P20: Doctors/nurses are able to understand patients' needs

The staffs' empathy for the patients' needs was also not a priority for improvement. For patients, this attribute was considered "less important" with an index score of 245, meanwhile the service performance also showed an equivalently "not good" performance. Although there was still a gap between the level of importance and performance, the gap between them was not too large, therefore the priority of this attribute was below the P11 attribute.

P22: Doctors/nurses have a comfortable work hours for the patients

Patients generally knew that the working hours of both nurses and doctors were tightly arranged and scheduled, therefore between one hospital and another had the same working hours. Thereby, patients considered this factor as an unimportant priority in services quality that patients expected. Total score for importance level of this attribute was only 214, meaning that the patients considered adjustment of working hours for the patients as "less important". Compared to the level of importance, service performance showed positive result with a score of 280 categorizing it as "neutral" or moderate level of performance.

P19: Doctors/nurses give personal/private attention to the patients

Empathy in the form of staff's personal attention to patients was also not a priority in improving service quality. The level of importance of this attribute according to patients was in the category of "neutral" as well as the performance level. However, according to the suitability analysis, this attribute had a positive gap with a ratio of 112.7%, thus in establishing new policies to improve service quality, this attribute did not need to be a priority to be evaluated.

#### **Excessive - Quadrant D**

Quadrant D was a quadrant that had a low level of importance but in contrast, the level of performance of the services provided was very high. The attributes in this quadrant were considered as excessive because improvements in these attributes did not make significant satisfaction with the patient.

P1: The maternity room has the latest equipments and technologies

Equipment needed in providing service was those that could work best and be relied on, even if it did not have to be new. Therefore this attribute was considered not too important for patients in ensuring quality of service. The service performance of this attribute was included in the "good" category which meant the equipment used to support services in the maternity room installation at Dr. Soetomo Hospital Surabaya was the latest equipment.

P3: Doctors and nurses in the maternity room dress nicely and look neat

The level of importance of attribute P3 which described how the staffs dressed neatly was considered "neutral" with an index score of 278, while the level of performance reached a value of 430, indicating that this attribute was in the "very high" category. This meant that there was a 54.7% gap between the level of importance and the performance shown by services in the maternity room.

P9: The maternity room has a complete medical record

The attribute about complete medical record also showed an excessive performance. The index score of importance of this attribute was only 334 while the level of performance score showed a value of 451, in addition there was a positive gap of 35% of patients' expectation.

P17: Doctors/nurses get enough support from the hospital management

The attribute P17 also showed excessive performance. The total score for importance level of this attribute was only 283 while the performance level reached a value of 450 so that there was a positive gap of 59% of the expected level of importance perceived by the patients.

#### **Customer Satisfaction Index (CSI)**

CSI is used to measure the level of patients' satisfaction with the service maternity room at Dr. Soetomo Hospital, Surabaya comprehensively. The grading of satisfaction is divided into 5 categories which are very dissatisfied, dissatisfied, neutral, satisfied or very satisfied. Table 4 presents the results of the Customer Satisfaction Index from the maternity room service at Dr. Soetomo Hospital, Surabaya.

Item	Mean Importance Score (MIS)	Importance Weighting Factors (WF)	Mean Satisfaction Score (MSS)	Weighted Score (WS)
P1	3.21	4.06	0.04	0.166
P2	4.00	3.76	0.05	0.191
P3	2.78	4.30	0.04	0.152
P4	4.21	4.32	0.05	0.231
P5	4.14	4.39	0.05	0.231
P6	4.39	4.61	0.06	0.257
P7	4.24	4.57	0.05	0.246
P8	4.05	4.23	0.05	0.218
P9	3.34	4.51	0.04	0.192
P10	3.67	2.20	0.05	0.103
P11	2.11	1.97	0.03	0.053
P12	3.89	2.04	0.05	0.101
P13	3.70	3.33	0.05	0.157
P14	4.25	4.12	0.05	0.223
P15	4.33	4.51	0.06	0.248
P16	4.37	4.21	0.06	0.234
P17	2.83	4.50	0.04	0.162
P18	3.84	3.34	0.05	0.163
P19	2.75	3.10	0.03	0.108
P20	2.45	2.39	0.03	0.074
P21	3.97	2.79	0.05	0.141
P22	2.14	2.80	0.03	0.076
Total	78.66	80.05	1.00	3.727
	3.727			
	1.53			

Table 4. CSI Analysis of the Quality of Hospital Maternity Room Installation Services. Dr. Soetomo Surabaya

#### CONCLUSION

Based on CSI calculation result in Table 4, the patient satisfaction index values obtained for the quality of service in the maternity room installation of Dr. Soetomo Hospital Surabaya is 74.3%. The CSI value is in the range of between 60% to 80% and thus is included in the "satisfied" category. From the CSI index value, it can be interpreted the patients' expectation of service quality in the maternity rooms currently has been fulfilled about 74.3% meanwhile the rest still needs improvement.

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