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The Relationship between Service Quality Based on Accreditation Status and Patient Satisfaction at Public Health Centers

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Abstract—Background: Public health center accreditation is a process to increasing service quality continuously. Patient satisfaction is closely related to service quality. **Purpose:** To determine the relationship between service quality and patient satisfaction based on accreditation status of the public health centers in Banda Aceh. **Methods:** A total 621 respondents were patients who received outpatient services at 11 accredited public health centers in Banda Aceh which consist of: 63 respondents at public health center accredited Dasar (basic level); 422 respondents at public health centers accredited Madya (intermediate level); and 136 respondents at public health centers accredited Utama (main level). This research is a quantitative study with a cross sectional design. Data collected by using a quistionnaire. Data analysis was carried out using statistical product and service solution version 26.0. **Results:** The results showed a significant relation between the accreditation status of the public health centers with service quality (p<0.05) and patient satisfaction (p<0.05). **Conclusion:** The higher the accreditation status of the public health center the quality of service. The level of patient satisfaction also increases by the higher level of accreditation status of the public health center.

Keyword— Public health center accreditation; service quality; patient satisfaction.

I. Introduction

ealth services quality has been important agenda in the health care system. The community's needs for standardized services and patient safety is getting real. Health care facilities are required to provide services in according by clinical quality standards and prioritize patient safety [1]. Therefore, the implementation of quality services according to patient expectations is very important [2]. Bad and unsafe health services will reduce public trust in the health system [3].

According to service quality concept that popularized by Pasuraman et al., ServQual, there is 5 dimensions of service quality: 1. tangibles: physique appearance, facility, tools, information facilities and man; 2. reliability: the ability to perform the promised service promptly, accurately and satisfactorily; 3. responsiveness: desire and ability to help customers and increase the quickness of service; 4. assurance: competence possessed to create a sense of security, free of risk or danger, certainty that includes knowledge-attitude-behavior; and 5. empathy: character and ability to give full attention, ease of contact, good communication and understanding of customer needs [4][5]. These dimensions are always changing dynamically depending on the quality of service [4].

Customer satisfaction is an important thing that must be created by an organization. Service quality is one of the important element in achieving customer satisfaction. Customer satisfaction refers to the benefits of a product or service that corresponds to customers expectation. Customer satisfaction will increase in line by improving the quality of service [6].

Public health center is a health service facility that organizes public health and first level individual health efforts by

prioritizing promotive and preventive to achieve the highest level of public health status in its working area [7]. The Ministry of Health of Indonesia requires the accreditation for primary healthcares to aim the improving health services in Indonesia. According to regulation of the Ministry of Health of Indonesia number 46 year of 2015 concerning the accreditation of primary healthcares and independent practices, health development is an integral and most important part of national development. Therefor, in an effort to improve the quality of services, public health centers must be periodically accredited at least once every 3 years [8]. With accreditation process, it will ensure that improvement of quality, performance, and implementation of risk management are carried out continuously at public health centers [9]. It is a quality assurance process which is related to improving the quality of health services [10].

The accreditation status of public health care consist of 5 level: not accredited; accredited Dasar (basic level); accredited Madya (intermediate level); accredited Utama (main level); and the highest level is accredited Paripurna (plenary level). It can be influenced by the availability and completeness of health supplies, facilities, and infrastructure that support the health services [11]. Regarding to patient satisfaction, accreditation is associated with an increase in patient trust and satisfaction with procedures and service quality, as well as a decrease in the number of concerns and complaints [12]. In this case, patient satisfaction is formed by an assessment of quality, clinical outcomes, and consideration of costs incurred with benefits obtained from the products or services that received [13]. In order to achieve patient satisfaction, it is necessary to increase standards in maintaining service quality [14].



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According to Department of Health the city of Banda Aceh in 2020, Banda Aceh has 11 accredited public health centers, which is 1 public health center accredited Dasar, 8 public health centers accredited Madya, and 2 public health centers accredited Utama.

II. RESEARCH METHODOLOGY

This research is an analytic descriptive study using cross sectional design. The data collection was carried out in January 4 - February 26, 2022 at all of accredited public health centers in Banda Aceh, Aceh, Indonesia. The study was conducted after obtaining ethical approval from the Ethical Clearance Committee of faculty of Medicine, university of Syiah Kuala, number: 414/EA/FK-RSUDZA/2021 signed at December 4, 2021.

The research sample was taken by cluster random sampling technique. A total 621 respondents were patients who received outpatient services at 11 accredited public health centers in Banda Aceh which consist of: 63 respondents at public health center accredited Dasar; 422 respondents at public health centers accredited Madya; and 136 respondents at public health centers accredited Utama.

The independent variable is accreditation status of the public health services. The intermediate variable is service quality that consist of 5 subvariables: tangibles; reliability; responsiveness; assurance; and empathy. The dependent variable is patient satisfaction. A self-administered quistionnaire was used, consisting of two section; section 1 is about patient satisfaction that consist of 9 statements; and section 2 is about service quality that consist of 28 statements. Data was analyzed using Chi Square and multiple logistic regression test.

III. RESULTS

TABLE 1. Characteristics of the respondents by accredited public health centers

| | A | Accredited Public Health Center | | | | | | | |
|----------------------------|----|---------------------------------|-----|------|-----|------|--|--|--|
| Characteristic | D | asar | Ma | dya | Uta | ama | | | |
| | f | % | f | % | f | % | | | |
| Group of age | | | | | | | | | |
| 17-25 years | 6 | 9.5 | 83 | 19.7 | 26 | 19.1 | | | |
| 26-45 years | 30 | 47.6 | 217 | 51.4 | 64 | 47.1 | | | |
| 46-59 years | 19 | 30.2 | 67 | 15.9 | 28 | 20.6 | | | |
| ≥ 60 years | 8 | 12.7 | 55 | 13 | 18 | 13.2 | | | |
| Amount | 63 | 100 | 422 | 100 | 136 | 100 | | | |
| Gender | | | | | | | | | |
| Male | 21 | 33.3 | 189 | 44.8 | 77 | 56.6 | | | |
| Female | 42 | 66.7 | 233 | 55.2 | 59 | 43.4 | | | |
| Amount | 63 | 100 | 422 | 100 | 136 | 100 | | | |
| Level of education | | | | | | | | | |
| Basic | 6 | 9.5 | 37 | 8.8 | 5 | 3.7 | | | |
| High | 57 | 90.5 | 385 | 91.2 | 131 | 96.3 | | | |
| Amount | 63 | 100 | 422 | 100 | 136 | 100 | | | |
| Occupation | | | | | | | | | |
| Government employee | 7 | 11.1 | 18 | 4.3 | 6 | 4.4 | | | |
| Government's company | 0 | 0 | 2 | 0.5 | 0 | 0 | | | |
| employee | 7 | | | | | | | | |
| Private's company employee | | 11.1 | 63 | 14.9 | 18 | 13.2 | | | |
| Student | 4 | 6.3 | 62 | 14.7 | 17 | 12.5 | | | |
| Self employee | 22 | 34.9 | 153 | 36.3 | 57 | 41.9 | | | |
| Unemployee | 23 | 36.5 | 124 | 29.4 | 38 | 27.9 | | | |
| Amount | 63 | 100 | 422 | 100 | 136 | 100 | | | |

Table 1 shows that the most respondents at public health center accredited Dasar, Madya and Utama came from 26-45 years old group. The women are the most at public health center accredited Dasar, namely 42 respondents (66.7%) and Madya, namely 233 respondents (55.2%). It is different at public health center accredited Utama which the men are the most, namely 77 respondents (56.6%). Based on educational level, most respondents come from high education level at the three levels of accredited public health centers. At public health center accredited Dasar, most respondents' occupation are unemployees, namely 23 respondents (36.5%). But the most respondents are self employees at public health center accredited Madya, namely 153 respondents (36.3%) and Utama, namely 47 (41.9%).

TABLE 2. Frequency distribution of the dimensions of service quality

| | Accredited Public Health Center | | | | | | |
|----------------|---------------------------------|------|-----|------|-----|-------|--|
| Dimensions | D | asar | M | adya | U1 | Utama | |
| | f | % | f | % | f | % | |
| Tangibles | | | | | | | |
| Not good | 54 | 85.7 | 344 | 81.5 | 62 | 45.6 | |
| Good | 9 | 14.3 | 78 | 18.5 | 74 | 54.4 | |
| Amount | 63 | 100 | 422 | 100 | 136 | 100 | |
| Reliability | | | | | | | |
| Not good | 55 | 87.3 | 338 | 80.1 | 63 | 46.3 | |
| Good | 8 | 12.7 | 84 | 19.9 | 73 | 53.7 | |
| Amount | 63 | 100 | 422 | 100 | 136 | 100 | |
| Responsiveness | | | | | | | |
| Not good | 37 | 58.7 | 163 | 38.6 | 27 | 19.9 | |
| Good | 26 | 41.3 | 259 | 61.4 | 109 | 80.1 | |
| Amount | 63 | 100 | 422 | 100 | 136 | 100 | |
| Assurance | | | | | | | |
| Not good | 53 | 84.1 | 326 | 77.3 | 61 | 44.9 | |
| Good | 10 | 15.9 | 96 | 22.7 | 75 | 55.1 | |
| Amount | 63 | 100 | 422 | 100 | 136 | 100 | |
| Empathy | | | | | | | |
| Not good | 55 | 87.3 | 341 | 80.8 | 62 | 45.6 | |
| Good | 8 | 12.7 | 81 | 19.2 | 74 | 54.4 | |
| Amount | 63 | 100 | 422 | 100 | 136 | 100 | |

Table 2 shows that all of dimensions rate are not good at public health center accredited Dasar. The dimensions rate of service quality at public health centers accredited Madya show a difference, rate of dimensions service for tangibles, reliability, assurance, and empathy are not good. But responsiveness is the only dimension has a good rate, namely 259 respondents choose it (61.4%). Meanwhile, the results analysis at public health centers accredited Utama, all of dimensions rate show a good values.

TABLE 3. Frequency distribution of service quality

| | • | Accredit | ted Publ | ic Healtl | h Center | • |
|--------------------|----------|----------|----------|-----------|----------|------|
| Quality of Service | Dasar Ma | | Madya | | Utama | |
| • | f | % | f | % | f | % |
| Not good | 55 | 87.3 | 329 | 78 | 60 | 44.1 |
| Good | 8 | 12.7 | 93 | 22 | 76 | 55.9 |
| Amount | 55 | 87.3 | 329 | 78 | 60 | 44.1 |

Table 3 shows that the best quality of service is at the public health centers accredited Utama, namely 76 respondents (55.9%) rated the service that they received was good.



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TABLE 4. Frequency distribution of the patient satisfaction

| Accredited Public Health Center | | | | | | | |
|---------------------------------|----|------|-----|------|-----|------|--|
| Patient Satisfaction | Da | sar | Ma | adya | Uta | ama | |
| | f | % | f | % | f | % | |
| Not satisfied | 39 | 61.9 | 278 | 65.9 | 40 | 29.4 | |
| Satisfied | 24 | 38.1 | 144 | 34.1 | 96 | 70.6 | |
| Amount | 63 | 100 | 422 | 100 | 136 | 100 | |

The highest rate of patient satisfaction was found at public health accredited Utama, namely 96 respondents (70.6%) were satisfied. The lowest rate of patient satisfaction was found at public health center accredited Dasar, namely 24 respondents (38.1%) were satisfied.

TABLE 5. The result of data analysis of the relationship between accreditation status of public health center and service quality

| Chi sausses | α | p-value |
|--------------|------|---------|
| Chi square — | 0.05 | 0.000 |

Table 5 shows that p-value = 0.000, which means p < 0.05. This result can be concluded that there is a significant relationship between accreditation status and service quality.

Table 6 shows that p-value = 0.000, which means p < 0.05. This result can be concluded that there is a significant relationship between service quality and patient satisfaction. Odd ratio = 26.516 (95% CI : 15.709 - 44.760) can be concluded that patients who rate the quality of service was not good, have a tendency to be less satisfied 26.5 more times.

TABLE 6. The result of data analysis of the relationship between service quality and patient satisfaction at public health center

| Quality of | Patient Sa | atisfaction | | | n | OR | |
|------------|------------------|--------------|-------------|------|-------------|-------------------|--|
| Service | Not satisfied | Satisfied | Total | α | p- value | (95% CI) | |
| Not good | 338 | 106 | 444 | | | | |
| Not good | 76.1% | 23.9% | 100% | | | | |
| Good | 19 10.7% | 158 89.3% | 177 100% | | 0.000 | 26.516 15.709- | |
| Total | 357 57.5% | 264 42.5% | 621 100% | 0.05 | | 44.760 | |

TABLE 7. The result of data analysis of the relationship between dimensions of service quality and patient satisfaction at public health center accredited Dasar

| Dimond | Dimension | | Patient Satisfaction To | | Total | | n volue | OR | |
|----------------|-----------|---------------|-------------------------|--------|-------|---------|---------------|----|--|
| Dimensi | on | Not satisfied | Satisfied | 1 Otal | α | p-value | (95% CI) | | |
| Tangibles | Not good | 37 | 17 | 54 | | | | | |
| rangibles | Not good | 68.5% | 31.5% | 100% | | | | | |
| | Good | 2 | 7 | 9 | 0.05 | 0.021 | 7.618 | | |
| | Good | 22.2% | 77.8% | 100% | 0.03 | 0.021 | 1.430-40.592 | | |
| | Amount | 39 | 24 | 63 | | | | | |
| | Amount | 61.9% | 38.1% | 100% | | | | | |
| Reliability | Not good | 36 | 19 | 55 | | | | | |
| Kenabinty | Not good | 65.5% | 34.5% | 100% | | | | | |
| | Good | 3 | 5 | 8 | 0.05 | 0.241 | 3.158 | | |
| | Good | 37.5% | 62.5% | 100% | 0.03 | 0.241 | 0.680-14.664 | | |
| | Amount | 39 | 24 | 63 | | | | | |
| | Amount | 61,9% | 38,1% | 100% | | | | | |
| Responsiveness | Not good | 29 | 8 | 37 | | | | | |
| Responsiveness | Not good | 78.4% | 21.6% | 100% | | | | | |
| | Good | 10 | 16 | 26 | 0.05 | 0.003 | 5.800 | | |
| | Good | 38.5% | 61.5% | 100% | 0.03 | 0.003 | 1.907-17.637 | | |
| | Amount | 39 | 24 | 63 | | | | | |
| | Amount | 61.9% | 38.1% | 100% | | | | | |
| Assurance | Not good | 36 | 17 | 53 | | | | | |
| Assurance | Not good | 67.9% | 32.1% | 100% | | | | | |
| | Good | 3 | 7 | 10 | 0.05 | 0.034 | 4.941 | | |
| | Good | 30% | 70% | 100% | 0.03 | 0.034 | 1.136-21.498 | | |
| | Amount | 39 | 24 | 63 | | | | | |
| | Amount | 61.9% | 38.1% | 100% | | | | | |
| Empathy | Not good | 38 | 17 | 55 | | | | | |
| Empany | not good | 69.1% | 30.9% | 100% | | | | | |
| | Good | 1 | 7 | 8 | 0.05 | 0.004 | 15.647 | | |
| | Good | 12.5% | 87.5% | 100% | 0.03 | 0.004 | 1.783-137.307 | | |
| | Amount | 39 | 24 | 63 | | | | | |
| | Amount | 61.9% | 38.1% | 100% | | | | | |

Table 7 shows that the reliability is the only dimension that has p-value > 0.05 which means there is no relation between reliability and patient satisfaction. Meanwhile the other dimensions: tangibles, responsiveness, assurance, and empathy have p-value < 0.05 which means there is a significant relationship between each dimension with patient satisfaction at public health center accredited Dasar. Tangibles has odd ratio $= 7.618 \ (95\% \ \text{CI} : 1.430 - 40.592)$ can be concluded that patients who rate the tangibles was not good, have a tendency to be less satisfied 7.6 more times.

Responsiveness has odd ratio = 5.800 (95% CI : 1.907 - 17.637) can be concluded that patients who rate the responsiveness was not good, have a tendency to be less satisfied 5.8 more times. Assurance has odd ratio = 4.941 (95% CI : 1.136 - 21.498) can be concluded that patients who rate the assurance was not good, have a tendency to be less satisfied 4.9 more times. Empathy has odd ratio = 15.647 (95% CI : 1.783 - 137.307) can be concluded that patients who rate the empathy was not good, have a tendency to be less satisfied 15.6 more times.



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Table 8 shows that all of dimensions of service quality have p-value < 0.05 which means there is a significant relation between each dimension and patient satisfaction at public health centers accredited Madya. Tangibles has odd ratio = 16.772 (95% CI: 8.788 - 32.000) can be concluded that patients

who rate the tangibles was not good, have a tendency to be less satisfied 16.8 more times. Reliability has odd ratio = 16.131 (95% CI: 8.725 – 29.821) can be concluded that patients who rate the reliability was not good, have a tendency to be less satisfied 16.1 more times.

 $TAB\underline{LE~8}.~The~result~of~data~analysis~of~the~relationship~between~dimensions~of~service~quality~and~patient~satisfaction~at~public~health~centers~accredited~\underline{M}{a}dya$

| Dimension | | Patient Satis | sfaction | Total | | p-value | OR |
|----------------|----------|---------------|-----------|-------|------|---------|---------------|
| | | Not satisfied | Satisfied | Total | α | p-value | (95% CI) |
| | Not and | 265 | 79 | 344 | | | |
| | Not good | 77% | 23% | 100% | | | 16.772 |
| Tangibles | Good | 13 | 65 | 78 | | 0.000 | |
| | Good | 16.7% | 83.3% | 100% | 0.05 | 0.000 | 8.788-32.009 |
| | A | 278 | 144 | 422 | 0.03 | | |
| | Amount | 65.9% | 34.1% | 100% | | | |
| D -12 - 1-2124 | N 1 | 263 | 75 | 338 | | | |
| Reliability | Not good | 77.8% | 22.2% | 100% | | | |
| | C 1 | 15 | 69 | 84 | | | 16 121 |
| | Good | 17.9% | 82.1% | 100% | 0.05 | 0.000 | 16.131 |
| | | 278 | 144 | 422 | 0.05 | 0.000 | 8.725-29.821 |
| | Amount | 65,9% | 34,1% | 100% | | | |
| n . | NY . 1 | 139 | 24 | 163 | | | |
| Responsiveness | Not good | 85.3% | 14.7% | 100% | | | |
| | C 1 | 139 | 120 | 259 | | | 5,000 |
| | Good | 53.7% | 46.3% | 100% | 0.05 | 0.000 | 5.000 |
| | | 278 | 144 | 422 | 0.05 | 0.000 | 3.041-8.222 |
| | Amount | 65.9% | 34.1% | 100% | | | |
| | N 1 | 258 | 68 | 326 | | | |
| Assurance | Not good | 79.1% | 20.9% | 100% | | | |
| | C 1 | 20 | 76 | 96 | | | 14.410 |
| | Good | 20.8% | 79.2% | 100% | 0.05 | 0.000 | 14.418 |
| | | 278 | 144 | 422 | 0.05 | 0.000 | 8.233-25.250 |
| | Amount | 65.9% | 34.1% | 100% | | | |
| T 1 4 | NT . 1 | 267 | 74 | 341 | | | |
| Emphaty | Not good | 78.3% | 21.7% | 100% | | | |
| | C 1 | 11 | 70 | 81 | | | 22.061 |
| | Good | 13.6% | 86.4% | 100% | 0.05 | 0.000 | 22.961 |
| | | 278 | 144 | 422 | 0.05 | 0.000 | 11.564-45.588 |
| | Amount | 65.9% | 34.1% | 100% | | | |

TABLE 9. The result of data analysis of the relationship between dimensions of service quality and patient satisfaction at public health centers accredited Utama

| Dimension | | Patient Sati | sfaction | Total | | p-value | OR |
|----------------|----------|---------------|-----------|-------|------|---------|----------------|
| Difficusion | | Not satisfied | Satisfied | | α | p-varue | (95% CI) |
| | Not good | 40 | 22 | 62 | | | |
| | Not good | 64.5% | 35.5% | 100% | | | |
| Tangibles | Good | 0 | 74 | 74 | | 0.000 | |
| | Good | 0% | 100% | 100% | 0.05 | 0.000 | - |
| | Amount | 40 | 96 | 136 | 0.03 | | |
| | Amount | 29.4% | 70.6% | 100% | | | |
| Reliability | Not good | 39 | 24 | 63 | | | |
| Kenability | Not good | 61.9% | 38.1% | 100% | | | |
| | Good | 1 | 72 | 73 | | | 117.000 |
| | Good | 1.4% | 98.6% | 100% | 0.05 | 0.000 | 15.244-897.988 |
| | Amount | 40 | 96 | 136 | 0.03 | 0.000 | 13.244-077.700 |
| | Amount | 29.4% | 70.6% | 100% | | | |
| Responsiveness | Not good | 18 | 9 | 27 | | | |
| Responsiveness | Not good | 66.7% | 33.3% | 100% | | | |
| | Good | 22 | 87 | 109 | | | 7.909 |
| | Good | 20.2% | 79.8% | 100% | 0.05 | 0.000 | 3.130-19.982 |
| | Amount | 40 | 96 | 136 | 0.03 | 0.000 | 3.130-17.762 |
| | Amount | 29.4% | 70.6% | 100% | | | |
| Assurance | Not good | 40 | 21 | 61 | | | |
| Assurance | Not good | 65.6% | 34.4% | 100% | | | |
| | Good | 0 | 75 | 75 | | | |
| | Good | 0% | 100% | 100% | 0.05 | 0.000 | |
| | Amount | 40 | 96 | 136 | 0.05 | 0.000 | - |
| | Amount | 29.4% | 70.6% | 100% | | | |
| Emphaty | Not good | 40 | 22 | 62 | | | |
| Emphaty | Not good | 64.5% | 35.5% | 100% | | | |
| | Good | 0 | 74 | 74 | | | |
| | G000 | 0% | 100% | 100% | 0.05 | 0.000 | |
| | Amount | 40 | 96 | 136 | 0.03 | 0.000 | - |
| | | 29.% | 70.6% | 100% | | | |



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Responsiveness has odd ratio = 5.000 (95% CI : 3.041 - 8.222) can be concluded that patients who rate the responsiveness was not good, have a tendency to be less satisfied 5 more times. Assurance has odd ratio = 14.418 (95% CI : 8.233 - 25.250) can be concluded that patients who rate the assurance was not good, have a tendency to be less satisfied 14.4 more times. Empathy has odd ratio = 22.961 (95% CI : 11.564 - 45.588) can be concluded that patients who rate the empathy was not good, have a tendency to be less satisfied 22.9 more times.

Table 9 shows that all of dimensions of service quality have p-value < 0.05 which means there is a significant relation between each dimension with patient satisfaction at public health centers accredited Utama. Reliability has odd ratio = 117.000 (95% CI: 15.244 - 897.988) can be concluded that patients who rate the reliability was not good, have a tendency to be less satisfied 117 more times. Responsiveness has odd ratio = 7.909 (95% CI: 3.130 - 19.982) can be concluded that patients who rate the responsiveness was not good, have a tendency to be less satisfied 7.9 more times.

TABLE 10. The result of data analysis of the relationship between accreditation status of public health center and patient satisfaction

| Chi sauara — | α | p-value |
|--------------|------|---------|
| Chi square — | 0.05 | 0.000 |

Table 10 shows that p-value = 0.000, which means p < 0.05. This result can be concluded that there is a significant relationship between accreditation status with patient satisfaction.

TABLE 11. The result of multiple logistic regression test of the dimension of service quality most related and patient satisfaction at public health center accredited Dasar

| decreated Dusti | | | | | | |
|-----------------|------|---------|-------|---------------|--|--|
| Dimension | α | p-value | OR | 95% CI | | |
| Responsiveness | 0.05 | 0.004 | 5.420 | 1.721 - 1.707 | | |

Table 11 shows that p-value = 0.004, which means p < 0.05. This result can be concluded that the responsiveness is the most related with patient satisfaction at public health center accredited Dasar. Odd ratio = 5.420 (95% CI : 1.721 – 1.707), can be concluded patients who rate the responsiveness was not good, have a tendency to be less satisfied 5.4 more times.

TABLE 12. The result of multiple logistic regression test of the dimension of service quality most related with patient satisfaction at public health centers

| accredited Madya | | | | | | | |
|-------------------------------|------|-------|-------|----------------|--|--|--|
| Dimension α p-value OR 95% CI | | | | | | | |
| Empathy | 0.05 | 0.003 | 4.500 | 1.655 - 12.235 | | | |

Table 12 shows that p-value = 0.003, which means p < 0.05. This result can be concluded that the empathy is the most related with patient satisfaction at public health center accredited Madya. Odd ratio = 4.500 (95% CI : 1.655-12.235), can be concluded that patients who rate the empathy was not good, have a tendency to be less satisfied 4.5 more times.

Table 13 shows that p-value = 0.001, which means p < 0.05. This result can be concluded that the reliability is the most related with patient satisfaction at public health center

accredited Utama. Odd ratio = 89.807 (95% CI: 11.555 - 697.989), can be concluded that patients who rate the reliability was not good, have a tendency to be less satisfied 89.8 more times

TABLE 13. The result of multiple logistic regression test of the dimension of service quality most related with patient satisfaction at public health centers

| accredited Otalila | | | | |
|--------------------|------|---------|--------|------------------|
| Dimension | α | p-value | OR | 95% CI |
| Reliability | 0.05 | 0.001 | 89.807 | 11.555 - 697.989 |

IV. DISCUSSION

The result showed that there is a significant relation between accreditation status of the public health centers with service quality by p-value = 0.000. So it can be concluded that the increase in accreditation status of the public health centers will be followed by an increase in the quality of service. It is in accordance with the main objective of accreditation of the public health center which in context of improving the quality of services continuously [8].

This is in accordance with the research conducted at public health centers in the city of Denpasar that accreditation status had a positively and significant relation with service quality [15]. In the process of accreditation, the organization committed to improving quality in order to improve patient safety culture [16].

According to the table 6 showed that p-value = 0.000, can be concluded there is a significant relation between service quality and patient satisfaction at accredited public health centers in the city of Banda Aceh. Also means the better quality of service then the better value of patient satisfaction. It is in accordance with the previous studies in the city of Denpasar and North of Sumatera that concluded there are significant relation between them [15][17].

Patient satisfaction is determined by a quick registration, waiting time, fast service, friendly an courteous staff, good medical skill and care, professional, clean room and complete facilities [18][19]. Perceived service quality is an overall assessment relating to service excellence, while satisfaction assessment is related to certain transactions that are more specific [20]. Sometimes respondents are satisfied with certain services but they do not feel that it is a quality. They measure the quality of service depending on interpersonal quality not only on health technical indicators, that what is ignored by providers [21]. The patient's perception of the desired service is influenced by what they need, past experiences, by word of communication, external and the influence (advertisements and promotions) [15][22].

Based on table 7, refers to p-value = 0.241 reliability is the only one dimension that has no relation with patient satisfaction at the public health accredited Dasar. It is in accordance with the previous research at public health center of Simeulu Timur that there were influence of tangibles, responsiveness, assurance, and empathy to patient satisfaction, but there was no influence of reliability to patient satisfaction [23]. As well as a previous research in the city of Semarang that concluded there was no difference in the reliability both before accredited and after accredited [10].



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According to the table 8 and table 9, the 5 dimensions of service quality: tangibles, reliability, responsiveness, assurance, and empathy were statistically significant with patient satisfaction, refer to p-value = 0.000 per dimension, both at the public health centers accredited Madya and Utama. These are related to the previous researches that concluded there were significant relation between them and patient satisfaction [24][25][26].

Based on table 10, there is a significant relation between accreditation status of public health centers and patient satisfaction. It can be concluded the better level of accreditation will increase patient satisfaction. It is in accordance with some previous researches that showed the accreditation status of public health centers related to patient satisfaction [12][13][27][28][29][30]. Accreditation status of the public health center has a significant contextual effect on patient satisfaction [21]. The accreditation of public health center can increase patient satisfaction by improving health services, reducing patient complaints and increasing the number of visits [12]. The accreditation is believed to be at least an indicator of the availability of proper services that can be easily assessed by patients. Patient satisfaction surveys are very important because they can describe what patients want [31].

According to table 11, responsiveness is the most related to patient satisfaction at public health center accredited Dasar. Responsiveness has a positive effect on patient satisfaction, that shows the greater responsiveness then the greater value of patient satisfaction. It includes the response or attitude of health workers in providing services to patient [33].

According to table 12, empathy is the most related to patient satisfaction at public health center accredited Madya. Empathy is to give sincere and individual or personal attention given to patients by trying to understand patient desires [32].

According to table 13, reliability is the most related to patient satisfaction at public health center accredited Utama. This result is in accordance with a previous research by Agustini that concluded there is a significant relation between reliability and patient satisfaction on hospitalized patients at hospitals in Indonesia [30].

V. CONCLUSIONS

Based on the discussion regarding to the relation between service quality based accreditation status and patient satisfaction of the public health centers in the city of Banda Aceh, it can be concluded several things as follow:

- There are significant relation between accreditation status and service quality of public health center and patient satisfaction at the public health centers in the city of Banda Aceh.
- 2. There are significant relation between dimensions of service quality: tangibles, responsiveness, assurance, and empathy with patient satisfaction at the public health center accredited Dasar in the city of Banda Aceh. But there is no significant relation between reliability and patient satisfaction at this level of accreditation status.
- 3. There are significant relation between 5 dimensions of service quality and patient satisfaction at the public health centers accredited Madya and Utama.

- 4. Responsiveness is the dimension of service quality that is most closely related to patient satisfaction at the public health center accredited Dasar.
- 5. Empathy is the dimension of service quality that is most closely related to patient satisfaction at the public health center accredited Madya.
- 6. Reliability the dimension of service quality that is most closely related to patient satisfaction at the public health center accredited Utama.

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