Analysis of Patient Satisfaction, Patient Knowledge and Quality of Healthcare at Army-Police Hospitals

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Abstract

To improve the quality of healthcare as the output of hospital care, it is necessary to implement various programs including assessing patient knowledge and patient satisfaction as an outcome assessment of the quality of healthcare in hospital. The aim of this research is to analysis the correlation and differences in patient knowledge and patient satisfaction with the quality of healthcare. The research method was observational analytic with cross sectional approach using a stratified disproportionate sampling with three sample Army-Police Hospitals as X, Y, Z. The sample of research subjects consisted of inpatients totalling 135 respondents. Data test used non-parametric analysis, namely the bivariate analysis of Spearman's rho correlation and multivariate analysis of the difference test with the Kruskal-Wallis test. There is a relationship between patient satisfaction and quality of healthcare at Y Hospital (Sig.-0.007) and no relationship between patient satisfaction and quality of healthcare at Z Hospital (Sig.0.414). There is a relationship between patient knowledge and quality of healthcare at Y Hospital (Sig.-0.048) and no relationship between patient satisfaction and quality of healthcare at Z hospital (Sig.0.263). There were no differences in the quality of healthcare at X, Y, Z hospitals (Asymp. Sig.0.341).
There were no differences in the knowledge of patients at X, Y, Z hospitals (Asymp. Sig.0.140). It was found that there were differences in terms of patient satisfaction at X, Y, Z hospitals (Asymp.Sig. 0.001). There is a relationship between patient satisfaction, patient knowledge and quality of healthcare at the X, Y, Z Army-Police Hospitals. There is no difference in quality of healthcare and patient knowledge but there is differences in patient satisfaction with the quality of healthcare at the X, Y, Z Army-Police Hospitals.

Keywords: patient satisfaction; patient knowledge; quality of health care.

1. Introduction

Quality is a decision related to the service process, contributing to the value of outcomes, meeting the needs of service users or goods that are multi-dimensional. Talking about the quality of healthcare implies that we are obliged to maintain and even improve the quality of healthcare. Perceptions of the quality of a service vary widely because they are very subjective. Various facts indicate that there are serious problems in the quality of healthcare in Indonesia. This is due to the absence of the best quality control system that can be applied. A deeper understanding of good governance is an effort towards the realization of better-quality healthcare.

1.1. Background

Quality and safe healthcare for patients are interrelated and cannot be separated. The outcome of quality and safe healthcare will result in a measure of the quality of healthcare in hospital accreditation. Therefore, it is necessary to establish an indicator for measuring the quality of healthcare. Donabedian in his famous article "Evaluating the Quality of Medical Care" introduced The Donabedian Model for assessing the quality of healthcare through a structure, process and outcome approach. Quality measurement is carried out by taking into account the 5 dimensions of healthcare quality using The Servqual Instrument (Short Service Quality) developed by Parasuraman, Zeithaml, and Boshoff and Gray [5,13,29]. The Institute of Medicine published a report that shocked many ("wake up call"): “TO ERR IS HUMAN”, Building a Safer Health System. Publication of the WHO collects figures hospital research in various country including America, Britain, Denmark, and Australia, found Adverse Event (AE) with a range of 3.2 to 16.6% [11]. According to research by author in [23] regarding estimating the incidence of adverse events in Portuguese hospitals: a contribution to improving quality and patient safety, the majority of Patient Safety Incident (PSI) cases were related to surgical procedures (27%), medication errors (18.3%) and home-acquired infections (12.2%). In Kupang City, data on PSI was reported from author in [32], regarding the level of knowledge of nurses about medication errors at Siloam Hospital Kupang based on data from the Quality and Risk Department of Siloam Hospital Kupang since January-May 2017 recorded 90 incidents and 94% were administration errors. Based on the hospital profile, Siloam Hospital is one of the accredited hospitals, but the incidence of AE is still frequent. This also does not only happen in the General Hospital but also in the Army-Police Hospitals, the PSI reporting data has still not been found [9,12,13,14,15,16,17].

2. Subject and Methods

This study used an observational analytic with a cross sectional approach. The population in this study was the
nurses and patients of Army-Police Hospitals. The sampling technique using a stratified disproportionate sampling with three Army-Police Hospitals are X, Y, Z. Furthermore, the selection of services unit samples, the sample was taken three inpatient service units in each sample hospital. Furthermore, the stage of determining the research subject, each inpatient room sample was taken by inpatients with the inclusion and exclusion criteria. Hospital inclusion criteria, namely Army-Police hospitals, accredited and implementing quality healthcare according to standards, are willing to be respondents for sample hospitals. The inclusion criteria for inpatients were willingness to be a respondent, being treated in the room for more than 2 days and adult patients aged $\geq$ 18 years $\leq$ 60 years. The sample of the research subjects were inpatients in three sample hospitals with a total of 135 respondents (45 respondents from each hospital). The data collection method was also carried out with qualitative data in the form of FGD to strengthen research data. The type of data used non-parametric analysis, for bivariate analysis using correlation test with the Spearman's rho test. Analysis multivariate for different test by Kruskal-Wallis test.

3. Results

Based on the Regulation of the Minister of Health of the Republic of Indonesia number 56 of 2014 concerning Classification and Licensing of Hospitals, based on the types of services provided, Hospitals can be established and operated by the Government, Local Government or the private sector. Hospitals that are established and operated by the Government are technical implementation units of Government agencies whose main tasks and functions are in the health sector or other government agencies. Other government agencies as referred to include the Police, the Indonesian National Army, Ministries or non-ministerial government agencies.[15] Hospital healthcare classifications consist of General Hospitals, Army-Police Hospitals and Special Hospitals. The research is done at Army-Police Hospitals. The Army-Police Hospitals consists of X, Y, Z hospitals and has followed the 2012 NHAS and implemented Quality of Healthcare.[17,18,24]

3.1. Quality of healthcare, patient satisfaction and patient knowledge at the Army-Police Hospital

<table>
<thead>
<tr>
<th>Variable</th>
<th>Assessment criteria</th>
<th>Hospital</th>
<th>Standard (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>X (%)</td>
<td>Y (%)</td>
</tr>
<tr>
<td>Quality of healthcare</td>
<td>Neutral</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Agree</td>
<td>45</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Strongly agree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Patient satisfaction</td>
<td>Neutral</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Agree</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Strongly agree</td>
<td>36</td>
<td>80</td>
</tr>
<tr>
<td>Patient knowledge</td>
<td>Less</td>
<td>2</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>Enough</td>
<td>43</td>
<td>95.6</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Univariate analysis of data on healthcare quality, patient satisfaction and patient knowledge in the X, Y, Z Army-Police hospitals categorical data as in the table below.
Based on table 1, the demand for healthcare at X and Z Hospitals does not comply with service standards, meaning that the implementation is ineffective. Meanwhile, the quality of healthcare at Y Hospital was only 3 respondents (6.7%) which was effective according to the hospital care standards. Patient satisfaction at X Hospital, there were only 36 respondents (80%) who fit/effectively standardize hospital care. Patient satisfaction at Y Hospital, there were 22 respondents (48.9%) according to/effective standardization of hospital care. While patient satisfaction in Z hospital there were 21 respondents (46.7%) were compliant/effective standardization of hospital care. Knowledge patients in the X and Z hospitals are not appropriate standardization of hospital care or ineffective. While the knowledge of patients at Y Hospital was only 2 respondents (4.4%) who were suitable/effective in standardizing hospital care.

3.2. The relationship between patient satisfaction, patient knowledge and the quality of healthcare

Bivariate analysis to see the relationship between patient satisfaction and patient knowledge with the quality of healthcare at the X, Y, Z Army-Police hospitals using the Spearman's rho test as shown in the table below.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Test</th>
<th>Hospital</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of healthcare</td>
<td>Patient</td>
<td>Spearman's rho</td>
<td>Relationships</td>
<td>Sig.0.278</td>
<td>Sig.0.414</td>
</tr>
<tr>
<td>Patient satisfaction</td>
<td>Spearman's rho</td>
<td>Relationships</td>
<td>Sig.--0.048</td>
<td>Sig.0.263</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>cannot be assessed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>There is a relationship with weak correlation coefficient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>There is a relationship with a moderate correlation coefficient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient knowledge</td>
<td></td>
<td>Negative relationship</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>There is a relationship with a weak correlation coefficient</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on table 2, the relationship between patient satisfaction and the quality of healthcare at X hospital cannot be assessed, this can happen because the data is constant. The correlation in Y hospital results (p Sig.0.278), meaning that there is a relationship between the two variables with a weak relationship strength. While the relationship in Y hospital results (p Sig. 0.414), meaning that there is a relationship between the two variables with a strong or moderate strength of the relationship. The relationship between patient knowledge and the quality of healthcare at X hospital cannot be assessed, this can happen because the data are constant. The
correlation in Y hospital results in a value of Sig.-0.048, meaning that the strength of the relationship between the two variables is very weak and the direction of the relationship is negative, the two variables are inversely proportional. While the relationship in Y hospital results (p Sig.0.263), meaning that there is a relationship between the two variables with a weak relationship strength.

3.3. The different quality of healthcare at the Army-Police Hospitals

Multivariate analysis to see differences in the quality of healthcare at the X, Y, Z Army-Police hospitals using the Kruskal-Wallis test as shown in the table below.

Table 3: Different test quality of healthcare, patient satisfaction and patient knowledge in X, Y, Z Hospitals

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hospital</th>
<th>Test</th>
<th>Mean Rank</th>
<th>Value of Asymp. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of healthcare</td>
<td>X</td>
<td>Kruskal-Wallis test</td>
<td>71.50</td>
<td>0.341</td>
</tr>
<tr>
<td></td>
<td>Y</td>
<td></td>
<td>66.87</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Z</td>
<td></td>
<td>65.63</td>
<td></td>
</tr>
<tr>
<td>Patient satisfaction</td>
<td>X</td>
<td></td>
<td>82.80</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Y</td>
<td></td>
<td>61.64</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Z</td>
<td></td>
<td>59.56</td>
<td></td>
</tr>
<tr>
<td>Patient knowledge</td>
<td>X</td>
<td></td>
<td>74.04</td>
<td>0.140</td>
</tr>
<tr>
<td></td>
<td>Y</td>
<td></td>
<td>64.78</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Z</td>
<td></td>
<td>65.18</td>
<td></td>
</tr>
</tbody>
</table>

Based on table 3, there was no difference in the quality of healthcare in X, Y, Z hospitals (Asymp. Sig. 0.341 (> 0.05). It was found that there were differences in terms of patient satisfaction at X, Y, Z hospitals (Asymp. Sig. 0.001 (<0.05). There were no differences in the knowledge of patients at X, Y, Z hospitals (Asymp. Sig. 0.001 (<0.05).

4. Discussion

4.1. The quality of healthcare at the Army-Police Hospitals

Various kinds of programs conducted by the hospital to improve the quality of healthcare. The quality of healthcare is improved and assessed through the SPO component approach, a modification of the Donabedian model, which contains structures, processes, outputs and outcomes that are linearly and positively related. Each hospital has a structure and process in place to provide healthcare in accordance with the hospital's minimum service standards. However, the outputs and outcomes are determined based on the implementation of services and become a benchmark for the quality of care from a hospital. The output forms the basis for the expected impact on the target. The implementation of output that meets the needs of healthcare is said to be effective. Here the output is in the form of healthcare quality and patient safety and how its effectiveness in meeting standards is the focus of researchers to research. Outcome is the final result or benefit that is felt from
paramedic action and services in the hospital to patients in the form of patient satisfaction and patient knowledge. The effective outcome depends largely on the quality of good structures and processes. The results of the service are not qualified or not effective if different or not as expected according to standardization set. The standard set for the quality of healthcare is 80% [14,16,24].

4.2. Patient satisfaction at the Army-Police Hospital

Patient satisfaction is the final result of the hospital healthcare dimension. There are many benefits if the hospital prioritizes patient satisfaction, such as: 1) medical recommendations for patient recovery will be happy to be followed by patients, 2) create a positive image of the hospital, 3) a positive image of the hospital will benefit the hospital from a socio-economic perspective, the patient increases , 4) stakeholders will trust the hospital which has a positive image and 5) the patient's rights will run smoothly during the service so as to prevent the occurrence of PSI [5,7]. In this study, it was found that most of the X, Y, Z hospitals had a fairly large percentage of patient satisfaction. Hospital X achieved 80% patient satisfaction, Y hospital is 48.9% and Z hospital is 46.7%. Results declared effective implementation if as expected in accordance with the standardization set. The standard set for patient satisfaction is 80% [10,25]. The results of the FGD also illustrate the support for this quantitative data. Most of the respondents were satisfied with the services at the hospital even though in the conditions of the Covid-19 pandemic that occurred, with all the limitations, the hospital still maintained and maintained patient satisfaction. For example, paramedic care and patient food service are considered, with the reason that paramedics want patients to recover quickly, with better health conditions

4.3. Knowledge of patients at the Army-Police Hospital

Patient knowledge is closely related to education, where with higher education, the person will have broader knowledge. There are several factors that affect patient knowledge such as internal factors (patient education, occupation, age) and external factors (environmental and socio-cultural). Hospital patients come from various backgrounds of knowledge and education. However, as a patient's right, hospital patients must be provided with knowledge of the rights and obligations of patients in the hospital based on the Hospital Law No.44 of 2009, articles 31 and 32 regarding the rights and obligations of patients which must be informed and obtained by patients during service at the hospital [3]. However, the patient's knowledge of this information is also influenced by several factors as described above. In this study, it was found that the knowledge of patients at RS X and Z was ineffective and did not comply with standardization. Meanwhile, the knowledge of patients at Y hospital was only 4.4% which was effective from the standard implementation of patient knowledge >67%. This is then reviewed from the patient's FGD answers. Since admission to hospitalization, the patient has obtained informed consent, and there is information about the patient's rights and obligations. However, during the research, many patients forgot what the information was. This was also emphasized because the time required for face-to-face meetings between patients and paramedics was limited due to hospital protocols related to the Covid-19 pandemic.

4.4. The relationship between patient satisfaction and the quality of healthcare at the Army-Police Hospitals
Patient satisfaction is influenced by several factors such as patient characteristics, namely age, education, occupation, ethnicity, social and economy. Apart from these factors, the factors that influence patient satisfaction are paramedic attitudes and administrative services. Linder Pelz in [33], states that patient satisfaction is a positive evaluation of various service dimensions. Services that are evaluated can be in the form of a small portion of services, for example one type of service from a series of outpatient or inpatient services, all types of services provided to cure a patient to the overall service system in the hospital. In this study, it was found that there is a correlation between patient satisfaction and the quality of healthcare in hospitals. Of course this is obtained from hospital services that pay attention to the overall service system as much as possible even though they experience problems with hospital health protocols during the Covid-19 pandemic. According to research by the authors in [27], there is a relationship between the quality of healthcare and patient satisfaction (p 0.025). A research conducted in Prima Husada Malang Hospital found that there is a strong correlation between service quality and patient safety goals on patient satisfaction (p 0.904) [31].

4.5. The relationship between patient knowledge and the quality of healthcare at the Army-Police Hospitals

Patient knowledge is influenced by several internal and external factors. Internal factors such as patient education, employment patient so that the patient gets better experience and knowledge and experience age. Factors which acts as environmental and social culture in obtaining information. Patients in this study have various educational, experience, occupational and socio-cultural backgrounds, so the value of patient knowledge on the quality of healthcare varies and results are correlated and some are uncorrelated. This also has an impact as a result of the current Covid-19 pandemic, which causes patients in hospitals to have limited time in obtaining information and knowledge directly about healthcare in hospitals. This factor is one of the impacts that causes the correlation of knowledge to the quality of healthcare to vary. Based on research by authors in [3] note that there is a correlation between patient knowledge and quality of healthcare (p 0.001). According to research by author in [34] about the relationship between knowledge and quality of patient care (p <0.001). So it is suggested for other researchers to conduct research on the correlation of patient knowledge and quality of healthcare after the pandemic has passed [3,20].

4.6. The different quality of health services at the Army-Police Hospitals

In the implementation of improving the quality of hospital healthcare, various programs from the ministry of health and hospitals have been carried out, one of which is hospital accreditation. The goal is to generalize the standardization of implementation in all regions in the archipelago. However, in practice, there are differences. For this reason, a different test is carried out to find whether there is a difference that should not occur. The X, Y, Z Army-Police Hospitals have implemented the latest NHAS and implemented quality healthcare programs. Likewise, in the Army-Police hospital classification system, the X, Y, Z Army-Police hospitals are in the same class. Then there should be no differences in implementation. The results of this study found that there was no difference in the quality of healthcare at the X, Y, X Army-Police hospitals, meaning that the quality of healthcare in the hospital was not standardized [14,17,24].

4.7. The difference in patient satisfaction at the Army-Police Hospitals
Based on the factors that influence patient satisfaction with healthcare’s during hospitalization, it is obtained based on the results of the structure and process of implementing healthcare in the hospital. Satisfaction is the end result of service. In implementation, there should be no difference in the level of patient satisfaction with services, but the results of the study show that there are differences. But it needs to be revisited, that the research was carried out in pandemic conditions which resulted in different implementation in each hospital, even though there was already a protocol for uniformity in the hospital, but in re-implementation it depended on infrastructure factors such as the ability of the hospital to equip paramedic examination services. Rapid test for Covid-19, availability of swab applications and so on. Most of the respondents were satisfied with the services at the hospital even in the conditions of the Covid-19 pandemic that occurred, with all the existing limitations [2].

4.8. The knowledge of patients at the Army-Police Hospitals

There were no differences in the knowledge of patients at the X, Y, Z Army-Police hospitals according to hospital implementation standards. The Army-police hospital has implemented the latest accreditation from NHAS and implemented an accreditation program including patient knowledge standards. Likewise, in the Army-Police hospital classification system, the X, Y, Z Army-Police hospital are in the same class [14,17,24].

5. Conclusion

There is a relationship between patient satisfaction, patient knowledge and quality of healthcare at the X, Y, Z Army-Police Hospitals. There is no difference in quality of healthcare and patient knowledge but there are differences in patient satisfaction with the quality of healthcare at the X, Y, Z Army-Police Hospitals

References


