

The Influence of Pharmacy Service Quality, Pharmacist's Competence, And Medication Availability for Patient Satisfaction

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Abstract: This study aimed to examine the influence of pharmacy service quality for patient satisfaction, the pharmacist competence toward patientsatisfaction, the pharmacist competence toward the availability of medication, and the impact of medication availability for patient satisfaction. The research population were 1,378 patients visiting a pharmacy per month; and the sample consisted 310 respondents. As a result, this study found that the quality of pharmacy service and pharmacist competence significantly influenced the availability of medication in the pharmacy. While the quality of pharmacy services has a significant effect on patient satisfaction. However, the pharmacist competence had no significant effect for patient satisfaction. Last, the availability of medication was significant to influence patient satisfaction.

Keywords: quality, competence, medication availability, satisfaction

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I.

Introduction

Quality Assurance in Healthcare is an approach that intend to assure improved quality of health care service to patients. Health staff are required to provide professional health services to both individuals and groups who generally expect for best health services to all patients (Satrianegara and Saleha, 2009: 39). Hospital Pharmacy Installation (IFRS) is a part of the hospital service that has fully responsibilities in managing pharmaceutical preparations and other medical supplies so that the entire medical distributions are under the control of a hospital pharmacy (one-door system). However, many IFRS have not been implemented such system yet (Yusmianita, 2005:35).

In this study, competence of health care staff has been considered essential in relation to a pharmacy's medication availability and patient satisfaction. In the field of pharmacy, the competence of pharmacists involve knowledge and expertise in providing pharmaceutical services for patients. The pharmacists must have adequate knowledge and skills that are trusted by the patient. Theirs should be continuously developed through formal and informal education based on current pharmaceutical science. The pharmacists should also have capacity to explain various information about medical products and services required by the patients. Moreover, the pharmacists need to have good management skills, especially in the process of medication planning, medication procurement, medication distribution and medication evaluation in order to control the cycles of medication within a hospital or a pharmacy.

Therefore, good cooperation between pharmacists and other hospital staff are important to improve higher quality of a pharmacy service. In particular, good relationships with doctors and other health care staff can support hospital pharmacy services for patient satisfaction. Maintaining the medication availability is also identified as a major impact for patient satisfaction. Furthermore, it is as an integral part of a health care system in providing medical quality, including clinical pharmacy services that are affordable to all levels of society.

Theoretical Review

Pharmaceutical care is defined as a form of a pharmacist's direct service to the patient (medication customers) in establishing, applying, and monitoring the utilisation of medical utilization for therapeutic outcomes, including appropriate patient, proper dose, appropriate efficacy (Dhanutirto, 2008). Purwastuti (2005) have conducted a research on the analysis of pharmaceutical service factors affecting the availability of medication. Then, Ifmaily (2006) also found that the relationships between pharmaceutical service factors with the availability of medication were due to the physical environment of pharmacy installations, pharmacy's service convenience, and medication safety information. Furthermore, Sulistyawati et al. (2012) indicated the low links of service convenience, medication prices, and service accessibility towards patient satisfaction. She

also found the strong links between patient satisfaction and medication buying decisions within a pharmacy installation. Accordingly, this study hypothesized:

H1: The quality of pharmacy services influences the medication availability in the pharmacy installation within Labuang Baji Hospital, South Sulawesi Province.

Quality of pharmacy service is referred to provide accurate information to meet patient satisfaction. In confirming a good quality, a pharmacy firstly has to convey what the patients need and think about a service quality. In other words, the pharmacy should understand its patients' perceptions, desires, and expectations. The best or the worst quality of pharmacy service should be the responsibility of all members of an organization (Rusdarti, 2004). Thus, the pharmacy service is integral within a hospital system that involve orientations to patient service accessibility, qualified medication supplies, clinical pharmacy services, and affordable services to all level of societies.

Today, the demand of high-qualified pharmacy services continues to grow. The current service is required not only about stocking and dispensing medication to patients; but also about interaction skills with patients and other professional health care services. The quality of pharmacy service can be optimized by managing a system of 'pharmaceutical care' to the entire health care staff. According to Zeithaml et al. (2009), the quality of services was considered as the comparison of two factor, i.e.: the patient's perception in experiencing the real service and the patient's expected service. Previous researches claimed various results. Sulistyawati et al. (2012), showed the relationship between convenience, medication prices, and service accessibility with patient satisfaction. Anitawati, et al. (2011), Hayaza (2013), and Sa'adah et al. (2014) viewed service quality from various dimensions, e.g.: empathy, tangible, assurance, reliability, and responsiveness. They gave evidence that the four dimensions had a positive relation to develop patient satisfaction. Moreover, Mukti et al. (2013) proved that there was a significant relationship between service quality and patient satisfaction by involving other dimensions, such as: pharmacist' technical competence, information system, accurate time service, and interpersonal care to patients. Therefore, the second hypothesis was regarded as follow:

H2: The quality of pharmacy service has an effect on patient satisfaction in the pharmacy installation within Labuang Baji Hospital, South Sulawesi Province.

Competence is essential for health care professionals. According to Boulter (1996), the level of competence is derived as follows: skill, knowledge, self-concept, self-image, trait and motive. Skill and knowledge tend to be more realistic and are relatively viewed on the surface rather than other characteristics of a person. In the pharmaceutical field, competence is defined as the ability and willingness of pharmaceutical staff in performing their pharmaceutical tasks effectively. Additionally, the competence of pharmacists is characterized as capabilities in the forms of knowledge, skill, and attitude of behavior to implement various pharmaceutical tasks so that they are able to perform their duties professionally, effectively and efficiently. Referring to Boyatzis (2006), the pharmacists with adequate pharmaceutical competence are able to work and fulfil the required duties and expected results in the hospital. They are also able to manage the balanced availability of medication in the pharmacy. Therefore, the third hypothesis was confirmed as follow:

H3: The competence of pharmacists influence the medication availability in the pharmacy installation within Labuang Baji Hospital, South Sulawesi Province.

The skill of the pharmacist significantly influences patient satisfaction. Mukti, et al. (2013) provided evidence that pharmacist's competence affected to patient satisfaction. On the other hand, a research by Saragih et al. (2014) exposed a different result on testing parameters between competence and satisfaction. In other words, the latter was in contrast with previous result indicating the insignificant impact between pharmacist's competence and patient satisfaction. However, this study intended to hypothesize that:

H4: The competence of pharmacists affect patient satisfaction in the pharmacy installation within Labuang Baji Hospital, South Sulawesi Province.

The medication availability is essential in a pharmacy service. This is one of the main factors to increase the profit for a pharmacy. The availability of any requested medicines and other pharmaceutical products lead patients to be satisfied with the pharmacy service since the patients do not need to buy medication out of the hospital. As a result, the pharmacy can significantly increase its profit in short periods.

The satisfaction of patients for a pharmacy service has a positive impact to the result of health services for both medical and non-medical services. These include medication availability, medication adherence, comprehension on the perceived medical information, and health care sustainability. In addition, patient satisfaction can be derived from good pharmacy service, friendly attitude of staff, and accessible service (Supranto, 1997). One of the indicators of a pharmacy's good service is from its patient satisfaction. The quick and accurate services in dispensing and delivering medicines can advance the level of patient satisfactions. Such

services are indeed achieved from the maximized service performance of pharmacists. A research conducted by Rosyid (2011) concluded that the medication availability as the standardized parameter can also increase patient satisfaction. Then, the fifth hypothesis of this study is delivered as follow:

H4: The availability of medication affect patient satisfaction in the pharmacy installation within RSUD LabuangBaji Hospital, South Sulawesi Province.

Furthermore, the conceptual framework of this study is presented as the following figure:

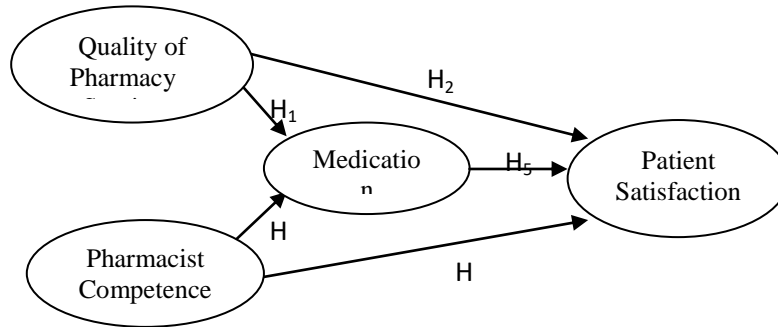


Figure 1: Conceptual framework

II. Research methods

This study applied quantitative approach that intended to test the relationship between variables. They were quality of pharmaceutical services, the competence of pharmacists, the availability of medication, and the patient satisfaction within a pharmacy installation. This research also applied a causality research approach that aimed to test the cause and effect relationship. The population of this study were 1,378 patients visiting a pharmacy installation within Labuang Baji Hospital, South Sulawesi Province per month. Based on Slovin approach, this study determined 310 patients as samples. In addition, source of data was obtained from the respondents who were recruited through simple random sampling. The techniques of data collection were conducted through questionnaires. Then, Analysis of Moment Structure was considered as a tool to utilize data analysis in the model calculation of Structural Equation Model (SEM).

III. Research results

The respondents who participated in this study were patients who have visited the pharmacy installation within LabuangBaji Hospital, South Sulawesi Province. They were described in terms of age, sex, education, and occupation. Their ages were predominantly between 41-50 years old (29%) and between 20-30 years (18.4%). The respondents were majority of men (53.2 %) and the rest were women (45.8%). The education of respondents included high school education level or with a total of 142 people or 45.8%. Then the last educational category with the least frequency is the Master degree, which is only as many as 20 people or 6.5%.

Analysis of Structural Equation Modeling (SEM)

The result of SEM model modification is presented in the following figure:

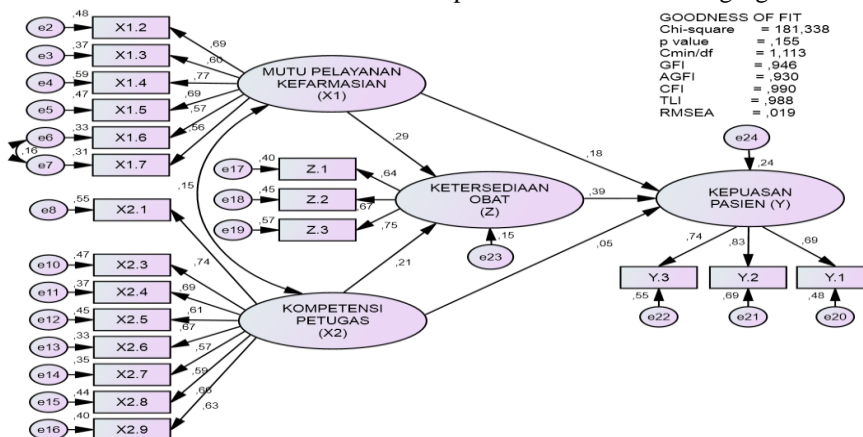


Figure 2. Modification of SEM Model

the results of calculating the value of goodness of fit indexes as the modification model was drawn as follow:

Table1: The Value of Goodness of Fit and Cut off Value (Modified Model)

Criteria	Results of Model Test	Critical Value	Notes
Probability X ² Chi square	0,155	≥ 0,05	Fit
Cmin/DF	1,113	≤ 2,00 atau 2,00 – 3,00	Fit
RMSEA	0,019	≤ 0,08	Fit
GFI	0,946	≥ 0,90	Fit
AGFI	0,930	≥ 0,90	Fit
TLI	0,988	≥ 0,95	Fit
CFI	0,990	≥ 0,95	Fit

The results showed that all goodness of fit criteria provided good index (fit). Then, this study used reliability testing of SEM model and interpretation for each coefficient as follow:

Table2 Coefficient Value of SEM, The Influence between Variables

Causal Relationships	Direct effect	Indirect Effect	Total Effect (direct + indirect)	CR	P Value
Quality of Pharmacy Service (X ₁) → Medication Availability (Z)	0,291	-	0,291	3,702	0,000
Quality of pharmacy service (X ₁) → Patient Satisfaction (Y)	0,177	0,291 x 0,388 = 0,113	0,290	2,427	0,015
Pharmacist Competence (X ₂) → Medication Availability (Z)	0,214	-	0,214	2,912	0,004
Pharmacist competence (X ₂) → Medication Availability (Y)	0,051	0,214 x 0,388 = 0,083	0,134	0,754	0,451
Medication Availability (Z) → Patient Satisfaction (Y)	0,388	-	0,388	4,343	0,000

The most influential variables on medication availability was the quality of pharmacy service because it had the largest total coefficient effect value (0.291), and then the competence of pharmacists was about 0,214. The most influential variable on patient satisfaction was the availability of medication because it had the largest total coefficient effect value (0.388), followed by the quality of pharmaceutical service (0,290) and officer competence (0,134). The quality of pharmacy services affected the availability of medication; moreover, the availability of medication also affected the patient satisfaction. While the quality of direct pharmacy services also affected the patient satisfaction. Thus, the quality of pharmacy service influenced patient satisfaction directly orthrough mediation of medication availability. It can be concluded that the availability of medication was as a partial mediation that influenced the quality of pharmacy service to patient satisfaction. Additionally, this study found that competence of pharmacists influenced the medication availability that, in turns, affected to patient satisfaction. In contrast, the medication availability did not directly affect patient satisfaction. The quality of pharmacy service solely affected patient satisfaction. It can be concluded that the availability of medication fully mediated the effect of medication availability on patient satisfaction.

Parameters on the existence of partial influence wasbased on CR (Critical Ratio)value.To determine whether or not the influence of exogenous variables on endogenous variables and endogenous variables on endogenous variables, this study used the provision of comparisom that calculated CR> 1,96 or -CR calculation<-1.96 or significance value of 0.05; then there were exogenous variables that influenced endogenous variables. Conversely, if CR arithmetic <1.96 or significance value> 0.05 so there was no influence of exogenous variables on endogenous variables or endogenous variables on endogenous variables.

IV. Discussion

The test results indicated that the quality of pharmacy services had a significant effect on the availability of medication in the observed pharmaceutical installation. The results of this study was in line with a research of Sulistyawati *et al.* (2012) that indicated the quality of service affected the utilization of pharmaceutical installation. Purwastuti's research (2005) also showed the factors of pharmacy service with the availability of medication. She identified that there was a significant relationship of physical environment

aspects of pharmacy installation, pharmacists' hospitality, extensiveness of medicines, service convenience, and medication safety information. Moreover, Ifmaily (2006) also showed the dimensions of pharmaceutical services that included IFRS performance, accessible service, speed of service officers, competence, medical information, and hospitality of staff gave great impacts on the medication availability.

The quality of pharmacy services had a significant effect on patient satisfaction in the pharmaceutical installation. The result of causality testing indicated the better the quality of pharmaceutical services, the patient's satisfaction at pharmacy installations in LabuangBaji Hospital would grow higher. The result of this study was in line with Bustami (2011), Anitawati, et al. (2011), and Mukti et al. (2013) that found the quality of health services would increase patient satisfaction. Indarjati (2009) also mentioned the existence of two kinds of satisfaction conditions that could be perceived by consumers in relation to the comparison between expectations and reality. If a patient's expectations or needs was fulfilled by the pharmacy, so the patient would feel satisfied with the pharmacy services. On the other hand, if the service was provided less than the patient's expectation so the patient would be dissatisfied with the given services. Accordingly, Sa'adah et al. (2014) confirmed that pharmacy services had a positive and significant effect on patient satisfaction, but it did not affect patient loyalty. Thus, it can be explained that the quality of pharmacy services affected the availability of medication; and in turns, gave impact to patient satisfaction within a hospital service system.

The test result toward the influence of mediation showed that the quality of pharmacy service had an effect on the availability of medication. In turn, the latter also affected the patient satisfaction. The quality of pharmacy service directly affected patient satisfaction. Thus the quality of pharmaceutical service influenced patient satisfaction, either directly or through mediation of medication availability. In conclusion, the availability of medication partially mediated the quality of pharmacy service to patient satisfaction.

Empirically, it was known that the friendly attitude of pharmacists and prompt service were able to increase patient satisfaction. Such friendly attitude and prompt services greatly affected medication services as the stated prescriptions based on patient's needs and given on time. So the patients felt more satisfied. Thus, the availability of medication was an important thing as the mediation to improve the quality of services in order to improve patient satisfaction. The test results showed that the pharmacists' competence significantly influenced the availability of medication. In the pharmaceutical field competence is defined as the ability and willingness of pharmaceutical staff to perform a pharmaceutical tasks effectively. The competence is also a capability and characteristic of a pharmacist to perform his or her knowledge, skill, and attitude to implement his or her pharmaceutical duties professionally, effectively and efficiently. In the case of pharmaceuticals, the pharmacists can effectively and efficiently work in order maintain the balance of medical availabilities in the pharmaceutical installation. In this study, the competence of pharmacists had no significant effect on patient satisfaction. The result of this study was not in line with the results of research by Mukti et al. (2013) and Simpson et al. (2012). They argued that the competence of the pharmacist was a determining factor in increasing patient satisfaction. The reason for the insignificant influence of the competence of the pharmacist with the patient's satisfaction was based on the responden profiles who mostly were old ages and had low level of education. Such patients were indicated paying less attention on how the pharmacists prepared the pharmacy facilities, including medicines and health equipments. For the patients of this study, the most important was that the pharmacy facility was affordable and quick to provide.

Then, the test result of the influence of intervening or mediation showed that the competence of pharmacists influenced to the availability of medication. In turn, the availability of medication also influenced to patient satisfaction. While the pharmacist's competence directly did not affect to patient satisfaction. Thus, the competence can only influence patient's satisfaction, indirectly or through mediation of drug availability. It can be concluded that the availability of medication was as a full mediation for the influence of pharmacist's competence to patient satisfaction. The competence of pharmacists can be improved primarily through the ability to use technology in pharmaceutical services (information technology pharmaceuticals). Empirically, it was known that the ability in using the information technology would impact on the appropriate medication services according to the prescriptions as needed by the patients and delivered on time. So, the patients would feel more satisfied. Thus, the availability of medicines was important as a major mediation to increase the competence of pharmacists in order to improve patient satisfaction.

Last, the test result using SEM showed that the availability of medication significantly influenced patient satisfaction. The availability of medication has been accepted to affect the users' satisfaction of pharmaceutical services. In addition to the availability of medicines, many other aspects are also important, including the attitude of pharmacists, the provision of medication information, facilities, location, waiting time for medication services, and medication prices.

V. Conclusion

In this study, each variable of pharmacy service quality affected the availability of medication and patient satisfaction. The quality of good pharmacy services supported the availability of medication more accurate and faster so that patient satisfaction could be improved higher. The medication availability variable affected the patient satisfaction, and the availability of appropriate medication as the quantity, quality, and time service. These, in turn, greatly gave impact on the improvement of patient satisfaction. In addition, the quality of pharmacy services had a significant effect on patient satisfaction, either directly or indirectly through the mediation of medicine availability. This meant that the quality of good pharmacy service could directly improve patient satisfaction. In other words, such service quality could increase the availability of medicine so that patient satisfaction could also increase. Maintaining the pharmacy quality services could be done by improving pharmacists' attitude, speed of service, and provision of medical information. The availability of medicines as a mediating variable to the extent of improving patient satisfaction also had an important role in relation to the pharmacist's ability to provide medication on time or even faster. Furthermore, the factor of patient satisfaction still needs to be carefully examined, especially indication of the patients' low feeling of pleasures.

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