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Patient satisfaction with pharmaceutical care services provided at primary-level and secondary-level health facilities in Indonesia's health coverage system

Luh Putu Febryana Larasanty, Maria Fiani Cahyadi and Ni Made Rai Sudarni
Pharmacist Educational Program, Faculty of Mathematics and Basic Science, University of Udayana, Denpasar, Indonesia, and
I Made Agus Gelgel Wirasuta
Department of Pharmacy, Faculty of Mathematics and Basic Science, University of Udayana, Denpasar, Indonesia

Abstract

Purpose – The purpose of this paper is to determine patient expectation and perception of pharmaceutical care services in order to measure the level of patient satisfaction provided by Indonesia's health coverage (IHC) system.

Design/methodology/approach – A patient satisfaction survey was conducted at primary-level and secondary-level health facilities operating under IHC system. The assessment was performed using a closed-ended questionnaire that had been tested for validity and reliability. The patients' point of view was evaluated based on their expectation and perception of six dimensions of the pharmaceutical care services they had received. Patient satisfaction was calculated based on the gap between their expectation and their perception.

Findings – A total of 602 patients participated in this research. The levels of the patients' expectation of the pharmaceutical care services provided at primary-level health facilities range from high (3.39) to very high (3.54), whereas at secondary-level health facilities, the range was from low (2.04) to very high (3.75). This indicates that patients have a higher expectation of the provided pharmaceutical care services compared to the actual experience of the healthcare services that they received, resulting in a low value in the measurement of patient satisfaction levels.

Originality/value – The high level of patient expectation is an opportunity for pharmacists at both primary-level and secondary-level health facilities to continue developing pharmaceutical care services. Improving drug information service, patient counseling and reducing patient waiting time can be good ways to increase patient satisfaction within pharmaceutical care services.

Keywords Health facilities, Indonesia's health coverage, Patient satisfaction, Pharmaceutical care

Paper type Research paper

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Background

The change in Indonesia's healthcare system following the implementation of Indonesia's health coverage (IHC) program in 2014 along with the capitation system that it applies to has had an impact on the role of pharmacists. The Indonesian Government through the Ministry of Health issues standards on pharmaceutical care services performed at each level of health facility which is a part of the national health insurance system. The pharmaceutical care standards serve as a benchmark provided as a guideline for pharmacists to administer the practice of pharmaceutical care[1–3]. Based on these standards, the role of pharmacists in Indonesia is no longer limited to the drug supply chain but extends to the practice of pharmaceutical care. This is an opportunity for Indonesian pharmacists to improve healthcare outcomes and patients' life quality through the practice of pharmaceutical care in health facilities.

The development of the pharmacist's practices that provide patient-oriented pharmaceutical care leads to the assessment of the quality of the services provided. Patient satisfaction is an indicator that can be used to assess the quality of healthcare services[4]. The measure of patient satisfaction as a patient's subjective assessment of healthcare service is an important parameter to improve the service in both community and hospital settings[5, 6]. It also indicates the gap between the quality of service expectation and patient perception. Assessing patient satisfaction is an approach to identify and track changes in patient needs, so the results can be used to conduct program assessments for better services and maximize the professional capacity in pharmacies[5, 6]. The aim of this study was to determine patient expectation and perception of pharmaceutical care services in order to measure the level of patient satisfaction.

Methods

Study design

This observational study was conducted in primary-level and secondary-level health facilities operating under IHC system located in the Denpasar Municipality, and in Badung, Gianyar and Tabanan regencies of Bali Province. Primary-level health facility refers to the community health center known as Puskesmas, and the secondary-level health facility refers to the hospitals. The health facilities used in this study were those that have been designated as IHC health providers by the government and meet the requirements of the number of pharmacists who practice the pharmaceutical care services. There were a total of 12 units of health facilities involved in this research.

The inclusion criteria were outpatients at the health facilities that received healthcare services within the national health coverage system. The sample size was determined using a formula at 95% confident of interval, while the level of precision/deviation in the population was 5 percent[7–9]. The minimum sample size in this study was 196 persons for each level of health facility. Consecutive sampling was applied to the sampling method. The quota for each health facility unit was determined first[7]. Later, the patients as respondents were consecutively selected in order of appearance until the total number of patients was reached[10].

Research instrument

The research instrument was a closed-ended questionnaire. Questionnaires were distributed to each patient and responses to each statement were collected. The statements in the questionnaire were based on the standards outlined in the Regulation of the Minister of Health of the Republic of Indonesia No. 58 of 2014 on Standards for Hospital Pharmaceutical Services; the Regulation of the Minister of Health of the Republic of Indonesia No. 30 of 2014 on Standards for Puskesmas Pharmaceutical Services; the Regulation of the Minister of

Health of the Republic of Indonesia No. 71 of 2013 on Healthcare Services in National Health Insurance; and the Presidential Regulation No. 12 of 2013 on Health Insurance. There are six main dimensions in the standards of pharmaceutical services at the primary-level and secondary-level health facilities, namely: general service, prescription service infrastructure, prescription screening and waiting time, dispensing, drug information and finally, patient counseling and monitoring[2, 3]. Each statement in the questionnaire is given a score of 1–4. The scores for positive statements move along a scale of 4 (strongly agree), 3 (agree), 2 (disagree), to 1 (strongly disagree). The scores for negative statements move along a scale of 1–4, i.e. 1 (strongly agree), 2 (agree), 3 (disagree) and 4 (strongly disagree)[11].

There are a total of 36 statements in the questionnaire for primary-level health facilities which are divided according to the dimensions as follows: 5 statements on general service; 3 statements on prescription service infrastructure; 8 statements on prescription screening and waiting time; 13 statements on dispensing; and 3 statements on drug information and patient counseling; 4 statements on monitoring. Meanwhile, the questionnaire for secondary-level health facilities contained a total of 38 statements which are divided as follows: 5 statements on general service; 3 statements on prescription service infrastructure; 8 statements on prescription screening and waiting time; 14 statements on dispensing; 4 statements on drug information and patient counseling; and 4 statements on monitoring. The questionnaire used in this research had been tested for its validity and reliability prior to data collection from the respondents.

Data collection

During the data collection phase, the patients who were willing to take part in the study were given an explanation about the purpose of this study. Subsequently, patients were provided with an informed consent form and a questionnaire containing statements related to pharmaceutical care services at each health facility.

Ethical consideration

The research had been approved by the Research and Development Department of Bali Province Investment and Licensing Board, pursuant to its decision number: 070/27109/IV/BPMP. Data collection was collected for 12 months.

Data analysis

Descriptive statistics were used to describe the demographic data of the patients, and patient expectation and perception of pharmaceutical care services provided at each health facility. The average score of all statements in each dimension was calculated and then classified into five groups. The interval values in each classification can be seen in Table I.

The calculation of patient satisfaction was adopted from service quality models. The level of patient satisfaction was indicated by the difference between the subject population expectation and their perception, often referred to as a score gap[14, 15]. The gap scores were classified based on the intervals shown in Table II to determine patient satisfaction levels.

Table I. Classification of patient expectation and perception of pharmaceutical care services[12, 13]

Interval	Classification of patient expectation and perception
1–1.6	Very low
> 1.6–2.2	Low
> 2.2–2.8	Intermediate
> 2.8–3.4	High
> 3.4–4	Very high

Results

Patients' characteristics

The total number of patients who were willing to fill out the research questionnaire was 602. The patients' demographic data can be seen in Table III. The number of male patients was higher than the number of female patients (52.66–47.34 percent) with the most dominant age range being 26–45 years (55.32 percent). Most of the patients' education level was up to secondary-level school (42.69 percent). The type of patients' profession with the largest percentage was recorded as entrepreneur (27.24 percent). As many as 23.92 percent of the patients were unemployed (23.92 percent).

Patient perception and expectation

Figure 1 shows the mean scores of patient perception and expectation of pharmaceutical care services at primary-level health facilities. The results show that the patient expectation score is much higher than the patient perception score. The levels of patient expectation of pharmaceutical care services at primary-level health facilities are classified into high and

Interval	Classification of patient satisfaction
−3 to −1.8	Very low
> −1.8 to −0.6	Low
> −0.6 to 0.6	Intermediate
> 0.6 to 1.8	High
> 1.8 s/d 3.0	Very high

Table II. Classification of patient satisfaction[13]

Item	Frequency (%)
Gender	
Male	317 (52.66)
Female	285 (47.34)
Age (years)	
18–25	49 (8.14)
26–45	333 (55.32)
46–65	179 (29.73)
> 65	41 (6.81)
Level of education	
Illiterate	20 (3.32)
Elementary	92 (15.28)
Intermediate	91 (15.12)
Secondary level	257 (42.69)
Diploma	67 (11.13)
University and above	75 (12.46)
Occupation	
Student	11 (1.83)
Private employee	99 (16.45)
Entrepreneur	164 (27.24)
Government employee	51 (8.47)
Farmer	64 (10.63)
Laborer	53 (8.80)
Retired	16 (2.66)
Unemployed	144 (23.92)

Table III. Demographic data of patients

very high. The average value of patient expectation for general service is 3.40 (high), for prescription service infrastructure 3.54 (very high) and for prescription screening and waiting time 3.46 (very high). The average value of patient expectation for the dispensing dimension is 3.52 (very high), drug information and patient counseling 3.39 (high) and monitoring 3.43 (very high).

The patient perception of pharmaceutical care services provided at primary-level health facilities is lower than the patient expectation, in that the levels of perceptions range from low to high. The average patient perception score for general service is 3.14 (high), for prescription service infrastructure 3.30 (high), prescription screening and waiting time 3.02 (high), and dispensing 3.06 (high). Meanwhile, the average value for drug information and patient counseling is 2.37 (intermediate) and the average score for monitoring is 2.22 (low).

Figure 1 shows the patient expectation and perception of pharmaceutical care services provided at the hospitals as secondary-level health facilities. The study results show that there is a difference between the patterns of patient expectation of pharmaceutical care services at primary-level health facilities and secondary-level health facilities. For hospital service (the secondary-level), the average patient expectation score for general service is 3.43 (very high), prescription service infrastructure 3.75 (very high), prescription screening and waiting time 3.19 (high), dispensing 3.43 (high), drug information and patient counseling 2.84 (high), and monitoring 2.04 (low). The range of patient expectation scores for pharmaceutical care services provided at the hospitals (secondary-level health facilities) is wider than that at primary-level health facilities (2.04–3.75 vs 3.39–3.54) (Figure 2).

A wide range of scores can also be seen in the patient perception of pharmaceutical care services provided at secondary-level health facilities. The levels of patient perception of pharmaceutical care services provided at hospitals range from very low to high. The score for general service is 3.00 (high), prescription service infrastructure 2.92 (high), prescription screening and waiting time 2.20 (low), dispensing 2.72 (intermediate), drug information and patient counseling 2.16 (low), and monitoring 1.55 (very low).

Patient satisfaction

Our study shows negative gap scores in six dimensions of pharmaceutical care services evaluated at primary-level and secondary-level health facilities. It turns out that the patient expectation scores for all dimensions are always greater than the patient perception scores. Table IV shows the results of the calculation of gap scores for patient satisfaction and its classification. Patient satisfaction scores with respect to pharmaceutical care services provided at primary-level and secondary-level health facilities are low.

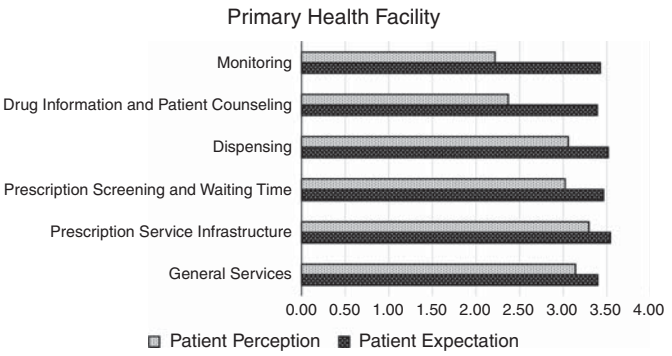

Figure 1.
Patient expectation and perception of pharmaceutical care services at primary-level health facilities

Discussion

Based on the survey of patient satisfaction with pharmaceutical care services, there is a correlation between patient expectation and experiences of pharmaceutical care services provided at health facilities[16, 17]. The number of patients surveyed in the study exceeded the minimum number required as research subjects. Demographically, most patients were of productive age, but there were patients who were not of productive age (> 65 years old). The patients had different types of jobs and some were unemployed. In Indonesia, every citizen has the same right to be a member of the national health insurance system, whether they are employed or not[1].

This study showed that patients who visited primary-level health facilities had a high expectation of good services from pharmacists. This finding is slightly different from the study conducted by Awad and Al-Rasheedi on the evaluation of public expectations of community pharmaceutical practice in Kuwait. They reported that the patients being surveyed expressed a moderate expectation of the pharmacists involved in the community[18]. The patients' expectations were only based on their experiences of services which fulfilled their perceived needs[19]. Patient expectation depends on what they need when they visit

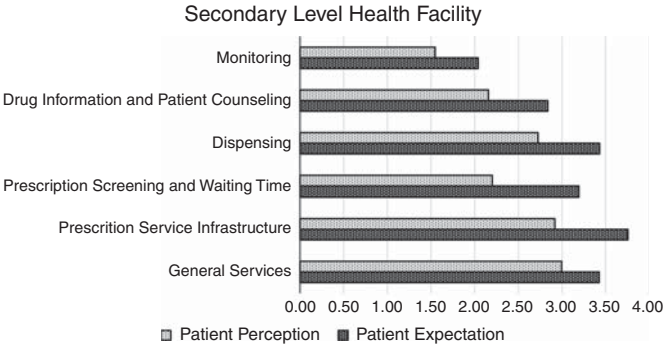

Figure 2.
Patient expectation and perception of pharmaceutical care services provided at secondary-level health facilities

No.	Health facilities	Score gap	Patient satisfaction
1.	*Primary-level health facilities*		
	General services	−0.25	Intermediate
	Prescription service infrastructure	−0.25	Intermediate
	Prescription screening and waiting time	−0.44	Intermediate
	Dispensing	−0.46	Intermediate
	Drug information and patient counseling	−1.02	Low
	Monitoring	−1.21	Low
	Mean score	−0.60	Low
2.	*Secondary-level health facilities*		
	General services	−0.43	Intermediate
	Prescription service infrastructure	−0.84	Low
	Prescription screening and waiting time	−0.99	Low
	Dispensing	−0.71	Low
	Drug information and patient counseling	−0.68	Low
	Monitoring	−0.49	Intermediate
	Mean score	−0.69	Low

Table IV.
Patient satisfaction with pharmaceutical care services provided at the primary-level and secondary-level health facilities

health facilities. The high level of patient expectation shows their acceptance of the role of pharmacists in providing pharmaceutical care services. This is a great opportunity for pharmacists in Indonesia to continue to develop their skills in providing pharmaceutical care services to patients.

The patients' expectation of pharmaceutical care services provided at the hospitals has a different pattern from that of the community health facilities. They have a high expectation in all aspects of pharmaceutical care services, except in the dimension of monitoring where the expectation is low. Hospitals as secondary-level health facilities work as a referral center in the national health insurance system. A health treatment issue that cannot be served at a primary-level health facility will be referred to hospitals. If a patient's health condition is improved and remains stable, the treatment will be continued at the primary-level health facility[1, 2]. Hence, the patient's monitoring therapy will be mostly at the primary-health facility.

The study showed that all dimensions of pharmaceutical care services assessed by the patients being surveyed had negative gap scores. This is because the patients' expectation is higher than their perception. Similar results are shown in a study conducted in Yogyakarta that reported negative gap scores in all dimensions of pharmaceutical care services[20]. The lowest gap scores for primary-level health facilities are on drug information and patient counseling and monitoring, whereas the lowest gap scores for secondary-level health facilities are on prescription screening and waiting time.

One of the major pro-active roles of community pharmacists is in drug information, patient counseling and monitoring of therapy. Pharmacists have an opportunity to reduce the level of morbidity by providing adequate information, counseling and monitoring of patients' drug therapy. Our study revealed that patients hoped that pharmacists could provide more time to answer their medical inquiries and provide them with additional printed information. However, in fact, the patients did not receive what they expected. This resulted in a low level of patient satisfaction. Satibi reported that there is a relationship between the level of patient satisfaction and drug information services[21]. Some studies indicated that the higher the frequency of counseling and monitoring, the greater the patient satisfaction will be[22].

Low levels of patient satisfaction due to long patient waiting time are one of the classic problems faced in hospital pharmaceutical care services. There is a strong correlation between patient satisfaction and patient waiting time[23–25]. Our findings revealed that the patients' experience of waiting time was not as they expected. The patients strongly agree that the waiting time is longer in the IHC system. It has been reported that the level of patient satisfaction will decrease if the waiting time for prescription services is longer than expected. The patients stressed their needs for a decreased waiting time. Several studies have reported various methods that can be used to shorten or optimize waiting time[24–26]. This study can be part of a recommendation for the managerial team and/or pharmacists at the secondary-level health facilities in dealing with prescription waiting time. Further studies on the correlation between the waiting time and the level of patient satisfaction are needed in Indonesia.

This study showed major changes in the healthcare system in Indonesia in early 2014 on how pharmacist services could be received by patients. The respondents tend to have a high expectation of pharmaceutical care services. Periodical evaluation of patient satisfaction can provide the parameters of improvement of pharmaceutical care services provided by pharmacists. Published studies on patient satisfaction in the pharmaceutical care services in Asian countries are still limited[5]. That is also the case in the studies on the same subject originating from Indonesia. Thus, the results from this study can be used to maximize pharmaceutical care services by improving the specific domain of pharmaceutical care services which affect patient satisfaction.

Limitation of this study

This study does not cover all health facilities since it was conducted only in four regions of Bali, Indonesia. Data collection at the national level will provide comprehensive descriptions of pharmaceutical care services in Indonesia. In addition, the possibility of bias from the patient's self-completed questionnaires cannot be completely excluded, although some arrangements to minimize this bias were made. At last, the first data collection of this survey was started in 2015, and the data collection was finished within 12 months. The possibility of changes may occur in subsequent years. However, our study results can be an early parameter of pharmaceutical service implementation in the Indonesian health insurance system and can be used as a benchmark for future research.

Conclusion

Measuring the level of patient satisfaction using various dimensions of services helps to predict the gap between patient needs and patient satisfaction regarding pharmaceutical care services. The patient expectation of pharmaceutical care services in IHC system is higher than patient perception. The results of this research showed a low level of patient satisfaction. Further research on the effects of drug information, counseling and waiting time on patient satisfaction should be conducted to improve the quality of pharmaceutical care services provided to patients.

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Corresponding author
Luh Putu Febryana Larasanty can be contacted at: febryana@unud.ac.id