A survey of consumer expectation in community pharmacies in Bandung, Indonesia

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ABSTRACT

The pharmacy has an important social as well as a functional role within an integrated health care system. Service quality has been an important topic to both health care providers and marketers as well as the focus of much recent research. This study was aimed to measure the service quality of community pharmacy based on patient's perceptions. A written survey was carried out among pharmacy costumers (n=500) in Bandung, Indonesia (in 5 community pharmacies). The survey method used questionnaire with Cross-Sectional descriptive study approaches and SERVQUAL model. The level of patient satisfaction was mapped by Cartesian diagram. Mapping attribute on Cartesian Diagram majority on quadrat B, means the patients who purchased the prescription was satisfied with the services provided. The results showed that patients who purchased their prescription at five of community pharmacies overall very satisfied with the services provided and no one really needs to be a priority to increase the satisfaction of patients with prescription treatments given.

INTRODUCTION

The pharmacy has an important social as well as a functional role within an integrated health care system. Efforts to improve public health can be performed by a pharmacist in a pharmacy by applying the concept of pharmaceutical services (Villako and Raal, 2007). Development of the pharmacy system and service is not only important from the viewpoint of the pharmacist as an entrepreneur, but also from the viewpoint of the whole society (White and Klinner 2011). Although pharmacy services are an integral part of health care system, there is limited research regarding service quality in this field. Traditionally, health care professionals including community pharmacists have been regarded by the public as delivering unquestioned services (Westerlund and Bjork, 2006). Patient satisfaction is an important measure of how well services are provided (Kukukarslan and Schommer, 2002). During the past decade, concern for service quality reached unprecedented levels. The present 'quality revolution' has been fired by exacerbated competition and many companies have now accepted the challenge of improving service quality. Service quality has been an important topic to both health care providers and marketers as well as the focus of much recent research because it contributes to the overall success of the health care practice (Mahon, 1996). Service quality can have a significant effect on patient satisfaction. Generally, the factors that influence the concept of patient satisfaction, as seen from the patients' perspective, are primary important. Other perspectives, such as those of the health care professionals, are lesser value (Fridlund, 2002).

Satisfaction has a positive relationship to purchase intentions and customer loyalty (McAlexander *et al.,*1994). Patient satisfaction is also a key aspect of health care, and it has been shown that there is a strong relationship between communication and patient satisfaction (Giltlow and Melby, 1991). The study is aimed to measure the quality of healthcare services delivered to patients by pharmacy in Bandung based on patient perceptions. Bandung is the city's largest metropolitan West Java as well as being the capital of the province. It is located 140 km southeast Jakarta, and the third largest city in Indonesia after Jakarta and Surabaya by population. While Bandung Raya is the third largest metropolitan in Indonesia after Jabodetabek and Gerbangkertosusila.

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The city's population increases every year which in 2010 recorded a population of as many as 2.393.633 people (BPS Jabar, 2011) Bandung Area's is about 167.67 km^2 (64.74 sq mi) (DISKOMINFO Pemkot Bandung, 2011).

METHODS

Research Design

A Cross-Sectional descriptive study was undertaken using the SERVQUAL questionnaire (Lam, 1997). The SERVQUAL (service quality) methods was developed by Zeithaml et al to determine levels of satisfaction and expectations (Zeithaml *et al.,*1990). This study includes five service quality dimensions; reliability, empathy, tangible, assurance, and responsiveness. A total of 20 closed-ended questions representing the five dimensions of service quality. The questionnaires was distributed to the patients who purchased their prescription at five of pharmacies in Bandung in December 2011 - April 2012.

Inclusion and exclusion criteria

The Inclusion criteria are the patients who purchased their prescription, while the exclusion was consumer, doctor and pharmacy employees.

Population and Sample

The population of this study are all patients who purchased the prescription at the pharmacy, while sample are the patients who purchased the prescription at pharmacy and willing to complete the questionnaires (purposive sampling).

The number of respondents (n) which used to determine the lebel of patient satisfaction with pharmacy service was calculated by Slovin formula (Adanza, 2006):

$$n \geq \frac{N}{1+ Ne^2}$$

where:

n   : number of respondents

N   : number of population (used the average total patients who fulfill the prescription at a pharmacy during the last five months)

e   : tolerance level of confidence, used $\alpha = 1\%$

Validity and Reliability Testing

Validity and reliability testing was conducted with 30 respondents. The validity and reliability testing was conducted and the result was analyzed using SPSS 13.0 for windows.

Data Collection Method

The data was collected by asking patients who purchased the prescription at the pharmacy to fill a questionnaire.

RESULTS AND DISCUSSION

The SERVQUAL scale has been tested and/or adapted in a great number of studies conducted in various service settings, cultural contexts and geographic location. The universality of the scale and its dimensions has also been the subject of criticisms and it is suggested that they require customization to the specific service sector in which they are applied (Buttle *et al.,*1996). Zeithaml *et al.,*in their SERVQUAL model, identified five dimensions which are responsiveness, reliability, assurance, tangibles and empathy on the basis of which customer's expectations and perceptions (Zeithaml *et al.,*1990).

A Cross-Sectional descriptive study was undertaken using the SERVQUAL questionnaire. A cross sectional study design measurements and observations was made simultaneously at one time (one time) (Man, 2003). Cross sectional studies are to determine prevalence. They are relatively quick and easy but do not permit distinction between cause and effect (Olsen *et al.,*2004).

Data analysis was conducted to determine the level of patient satisfaction using a comparison between patient expectation and reality in terms of pharmacy service and Cartesian diagram (Herwanto *et al.,*2013).

Validity and Reliability testing

Reliability is a measure which indicates that the measuring instruments used in the research have reliability as a measurement, while validity is a measure that indicates that the measured variable is really variable to be studied by researchers (Saane *et al.,*2003).

Result of validity testing showed that questionnaire is valid, which can be seen in table 1-2.

Reliability testing result showed that the questionnaire is reliable. The result can be seen in table 3-4. The level of reliability using Alpha-Cronbach method was measured based on alpha scale 0-1, as presented in table 5.

Frequency distribution of respondent characteristic

Frequency distribution of respondent characteristic in this research can be seen in table 5.

Based on the results of the frequency distribution characteristics of the respondents in Table 5 it can be seen that:

Gender

Patients who fill a prescription at pharmacies mostly women (58.6%). This suggests that women are more concerned about their health than men.

Age

Patients who fill a prescription at pharmacies mostly adult patients with age group <20 years (19,2%), 20-50 years (65,2%) and >50 years (15,6%). Patients of child bearing age have a higher activity than other age groups. Therefore, the possibility of patients was too busy so her immune system is more susceptible to disease or lack of attention to his health. But the excess, the patient's age group will facilitate the acceptance of the information provided pharmacy because it has a good perception than other age groups younger or older.

Education

Patients who fill a prescription at the pharmacy, most patients with academy graduates/diploma/degree (47.4%). This indirectly indicates that the higher education, the higher level of public awareness of the importance of health.

Job

Patients who fill a prescription, most patients who were civil servants/employees (39.2%). That is because the employee has a health insurance card, which cooperate with that pharmacies so that they are more likely to check their health and fill a prescription at the pharmacy.

Patient's expectation and reality of the prescription service at the pharmacy

Patient's expectations and the reality of the prescription service at the pharmacy can be seen at table 6.

Patient Satisfaction Levels for Prescription Services

Results of measuring the level of patient satisfaction for prescription service at pharmacy can be seen in Table 7.
Based on the results of measurements the satisfaction patient level with pharmacy services on prescribing in Table 7, it can be seen that:

Reliability dimensions

On this dimension, the patients were satisfied with the generosity of drugs in pharmacies and very satisfied with the completeness of drugs, quality of drugs assured and friendliness of staff. It can be concluded that the pharmacy has been able to provide the promised service accurately.

Assurance dimension

On this dimension, patients are satisfied with the knowledge of officers and are delighted with the clarity of information, and completeness of information and security parking. It shows that pharmacies are able to provide the services regarding drugs information that patient use with very good and ensure the patient's sense of security to the vehicle.

Tangible dimension

At these dimensions the patient very satisfied with the building look, comfort and hygiene, and officers appearance as well as were satisfied with the ease of parking. This indicates that the pharmacy is able to provide the best facilities for patients.

Emphaty dimensions

At these dimensions the patient was very satisfied with the care workers, equality between patient care, and the availability of service information. In addition, patients were satisfied with the availability of the service complaints. It shows that the pharmacy is able to demonstrate a sense of empathy/concern for his patients.

Responsiveness dimension

On this dimension, the patient was satisfied with the speed of service and officer responsiveness of the patient's complaints. The patient was very satisfied with the readiness and alertness of officers in the service of providing an alternative treatment. It shows that the pharmacy has an excellent willingness to assist the patient in response to patient complaints and always ready to serve the needs of the patient. From the results of the average value of the correlation of patient satisfaction, overall prescription at a pharmacy service is very satisfying.

The Relationship between Patient's Expectation and Reality

Correspondence between the expectations and reality of the prescription service at the pharmacy can be seen in Figure 1 and Table 8.

Based on cartesian diagram and classification of satisfaction level with the prescription services to five pharmacies in Figure 1 and Table 8, it can be seen the relationship between expectations and reality in pharmacy prescription services, such as:

Quadrant A

Generosity drug prices be a top priority for further enhanced by the fact that patients want a change in drug prices to be cheaper, but an outline generosity drug prices is felt satisfied by most patients.

Quadrant B

Drug quality, hospitality workers, knowledge workers, clarity of information, officer responsiveness to complaints patient, officer preparedness and readiness in providing alternative medicine is in quadrant B (keep achievement). In this quadrant is known that customer expectations are very high on the factors above. Based on the results of the survey in the field, it is known that fact in accordance with the patient's expectations. Therefore, the fulfillment of these factors will have to be maintained.

Quadrant C

Availability of service complaints and speed of service are in quadrant C (low priority), meaning that these factors should be corrected. However, these factors need not worry because the expectation of patients to these matters are also not too big.

Quadrant D

Completeness of drugs, appearance building , officers appearance, ease of parking, caring of staff, equality between patient care, and the availability of information services is in quadrant D (exaggeration), meaning that these factors are at the expectation level of that is not so important, but has performance levels satisfying and very well regarded by the patient/customer. In other words, these factors exceed the expectations of patients.

Table. 1: Validity Testing Result (expectation).

No.	Pharmacy Service	R	r_{table} (α = 95%)	Validity
	Reliability			
1	Completeness of Drug	0,449	0,361	Valid
2	Quality of drug	0,409	0,361	Valid
3	Hospitality of Worker	0,491	0,361	Valid
4	Cheapness of drug	0,484	0,361	Valid
	Assurance			
5	Worker knowledge	0,438	0,361	Valid
6	Clarity of information	0,466	0,361	Valid
7	Completeness of information	0,607	0,361	Valid
8	Parking security	0,568	0,361	Valid
	Tangible			
9	Look of the building	0,595	0,361	Valid
10	Comfort and cleanliness	0,599	0,361	Valid
11	Appearance of worker	0,593	0,361	Valid
12	Ease of parking	0,559	0,361	Valid
	Empathy			
13	Concern officer	0,635	0,361	Valid
14	Equality of the patient	0,401	0,361	Valid
15	Availability of information service	0,491	0,361	Valid
16	Availability of complaint service	0,607	0,361	Valid
	Responsiveness			
17	Quick service	0,518	0,361	Valid
18	Officer's responsiveness to the patient's complaint	0,417	0,361	Valid
19	Readiness officer in serving	0,646	0,361	Valid
20	Alertness in provide an alternative treatment	0,501	0,361	Valid

Confidence level   :   95%
Valid   : $r > r_{table}$

Table. 2: Validity Testing Result (Reality).

No.	Pharmacy Service	R	r_{table} (α = 95%)	Validity
	Reliability			
1	Completeness of Drug	0.612	0,361	Valid
2	Quality of drug	0.617	0,361	Valid
3	Hospitality of Worker	0.587	0,361	Valid
4	Cheapness of drug	0.477	0,361	Valid
	Assurance			
5	Worker knowledge	0.558	0,361	Valid
6	Clarity of information	0.581	0,361	Valid
7	Completeness of information	0.559	0,361	Valid
8	Parking security	0.622	0,361	Valid
	Tangible			
9	Look of the building	0.622	0,361	Valid
10	Comfort and cleanliness	0.602	0,361	Valid
11	Appearance of worker	0.650	0,361	Valid
12	Ease of parking	0.541	0,361	Valid
	Empathy			
13	Concern officer	0.636	0,361	Valid
14	Equality of the patient	0.596	0,361	Valid
15	Availability of information service	0.603	0,361	Valid
16	Availability of complaint service	0.542	0,361	Valid
	Responsiveness			
17	Quick service	0.504	0,361	Valid
18	Officer's responsiveness to the patient's complaint	0.616	0,361	Valid
19	Readiness officer in serving	0.693	0,361	Valid
20	Alertness in provide an alternative treatment	0.525	0,361	Valid

Confidence Level   :   95%
Valid   : $r > r_{table}$

Table. 3: Level of reliability based on Alpha-Cronbach value[25] .

Alpha value	Level of reliability
0,80 – 1,00	Very reliable
0,60 – 0,79	Reliable
0,40 – 0,59	Sufficiently reliable
0,20 – 0,39	Rather reliable
0,00 – 0,19	Less reliable

Table 4. reliability testing result.

Variable	α value	Level of Reliability
Expectation	0,661	Reliable
Reality	0,847	Very reliable

Table 5. Characteristics of Study Participans.

Respondent Characteristic	Result (n = 500)	Proportion (Total = 100%)
Gender:		
Male	207	41.4
Female	293	58.6
Total	500	100
Age (year):		
< 20	96	19.2
20-50	326	65.2
>50	78	15.6
Total	500	100
Education:		
Elementary school	28	5.6
Junior high school	76	15.2
High school	159	31.8
Academy/diploma/bachelor	237	47.4
Total	500	100
Employment:		
Entrepreneur	70	14
Housewife/unemployment	80	16
Civil servant/employee	196	39.2
Others	154	30.8
Total	500	100

Table 6. Patient's expectation and reality of the prescription service.

No.	Pharmacy Service	Expectation				Reality			
		1	2	3	4	1	2	3	4
	Reliability								
1	Completeness of Drug	0	2	168	330	6	76	307	111
2	Quality of drug	0	7	150	343	1	19	350	130
3	Hospitality of Worker	2	6	135	357	11	46	326	117
4	Cheapness of drug	4	41	273	182	36	258	172	34
	Assurance								
5	Worker knowledge	0	16	240	244	1	101	279	119
6	Clarity of information	0	6	199	295	4	37	312	147
7	Completeness of information	0	8	231	261	5	50	311	134
8	Parking security	8	16	219	257	27	53	309	111
	Tangible								
9	Look of the building	0	45	307	148	29	103	304	64
10	Comfort and cleanliness	0	19	331	150	5	71	350	74
11	Appearance of worker	0	84	289	127	4	50	388	58
12	Ease of parking	0	67	273	160	28	105	324	43
	Empathy								
13	Concern officer	0	10	306	184	3	61	356	80
14	Equality of the patient	0	14	304	182	5	74	365	56
15	Availability of information service	4	14	221	261	11	80	353	56
16	Availability of complaint service	3	63	275	159	35	182	229	54
	Responsiveness								
17	Quick service	0	13	279	208	7	112	265	116
18	Officer's responsiveness to the patient's complaint	0	11	247	242	5	69	325	101
19	Readiness officer in serving	1	13	248	238	11	67	309	113
20	Alertness in provide an alternative treatment	0	20	264	216	3	73	331	93

*Note:
1. : very unimportant
2. : unimportant
3. : important
4. : very important

Table. 7: Level of Patient Satisfaction For Prescription Service at Pharmacy.

No	Pharmacy Service	Average of expectation score	Average of reality score	Correlation value	Level of Satisfaction
	Reliability				
1	Completeness of Drug	3.656	3.046	0.833	Very satified
2	Quality of drug	3.672	3.218	0.876	very satisfied
3	hospitality of Worker	3.694	3.098	0.839	very satisfied
4	Cheapness of drug	3.266	2.408	0.737	Satisfied
	Assurance				
5	Worker knowledge	3.456	3.032	0.877	very satisfied
6	Clarity of information	3.578	3.204	0.895	very satisfied
7	Completeness of information	3.506	3.148	0.898	very satisfied
8	Parking security	3.45	3.008	0.872	very satisfied
	Tangible				
9	Look of the building	3.206	2.806	0.875	very satisfied
10	Comfort and cleanliness	3.262	2.986	0.915	very satisfied
11	Appearance of worker	3.086	3	0.972	very satisfied
12	Ease of parking	3.186	2.764	0.868	very satisfied
	Empathy				
13	Concern officer	3.348	3.026	0.904	very satisfied
14	Equality of the patient	3.336	2.944	0.882	very satisfied
15	Availability of information service	3.478	2.908	0.836	very satisfied
16	Availability of complaint service	3.18	2.604	0.819	very satisfied
	Responsiveness				
17	Quick service	3.39	2.98	0.879	very satisfied
18	Officer's responsiveness to the patient's complaint	3.462	3.044	0.879	very satisfied
19	Readiness officer in serving	3.446	3.048	0.885	very satisfied
20	Alertness in provide an alternative treatment	3.392	3.028	0.893	very satisfied
Total		68.05	59.3	17.435	-
Average		3.403	2.965	0.871	very satisfied

Table. 8: Classification of Prescription Service Satisfaction Levels based on Cartesian diagram.

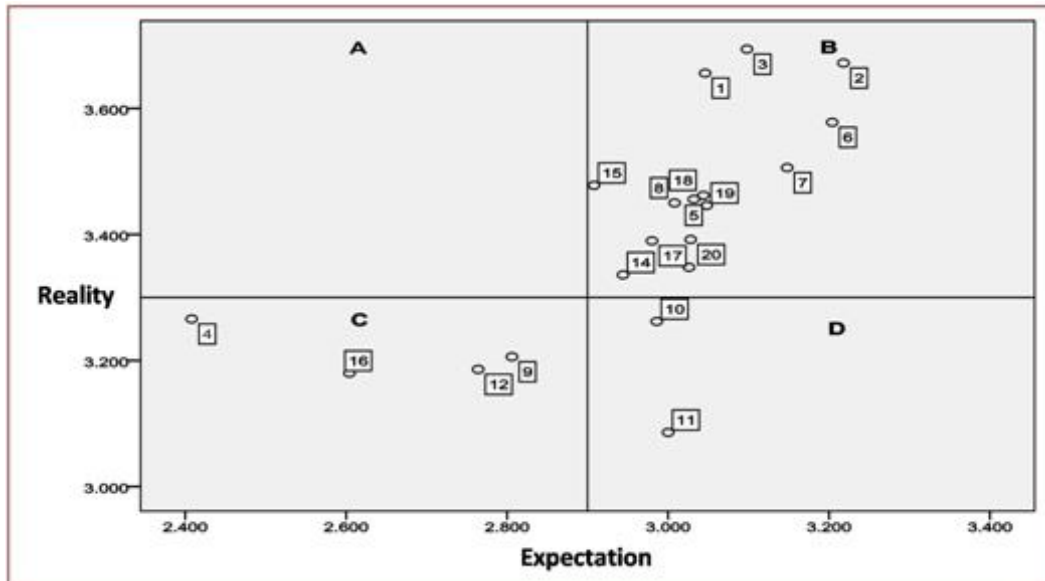| A (Main priority)	B (Maintain the achievement)	C (low priority)	D (Excessive)
	Completeness of Drug	Cheapness of drug	Comfort and cleanliness
	Quality of drug	Look of the building	Appearance of worker
	Hospitality of Worker	Ease of parking	
	Worker knowledge	Availability of complaint service	
	Clarity of information		
	Completeness of information		
	Parking security		
	Equality of the patient		
	Availability of information service		
	Quick service		
	Officer's responsiveness to the patient's complaint		
	Readiness officer in serving		
	Alertness in provide an alternative treatment		
	Quick service		

Fig 1 Cartesian Diagram of Patient Satisfaction Level.

CONCLUSION

Patients who purchased their prescription at five of pharmacies in Bandung, overall very satisfied with the services provided, and no one really needs to be prioritized to improve patient satisfaction with recipe care given . Although patients have been very satisfied with the service provided, the pharmacies must maintain and improve pharmacies performance better.

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