ORIGINAL ARTICLE

A study investigating the level of satisfaction with the health services provided by the Pharmacist at ENT hospital, Eastern Region Alahsah, Kingdom of Saudi Arabia

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Abstract The current study aims to evaluate the patient's level of satisfaction with health care services provided by the pharmacist at Aljaber ENT hospital, Eastern Region Alahsah, Kingdom of Saudi Arabia. A cross sectional study was planned from 1st March 2011 until 31st May 2011. A 27 item questionnaire was used, scoring of the responses was done to classify the patient satisfaction into sublevels. The maximum possible score was 36; those scoring less than twenty were graded as poor satisfaction level followed by moderate satisfaction level 21–25, good satisfaction level 26–30 and high satisfaction level 31–36. Statistical package for social science version 13® was used to analyze data, One-way ANOVA and independent sample t-test were applied to see the differences in the level of satisfaction. Every third patient visiting pharmacy was given a chance to participate in this study. A total of $N = 991$ patients were randomized using the pharmacy appointment number. Of whom 657 patients have shown willingness to participate in this study. The response rate of this study was 66.30%, most of the respondents 383 (58.1%) were male ranging from the age group of 21–40 years with a mean age of 32 years SD 9.73. The mean score for all patients was 26.15 SD ±3.4. Among all the demographic variables a significant difference in satisfaction level was found among in terms of age (df = 8, $F = 8.36$, $p = <0.001^*$), gender ($t = -4.089$, df = 656, $p = <0.001^*$) and race (df = 2, $F = 8.47$, $p = <0.001$. The satisfaction level among Saudi nationals was least in comparison to Egyptians and others. In general, it is seen that respondents of age 56–60 years were most satisfied with the healthcare services provided by the pharmacist. In addition, the satisfaction level was higher among female patients in comparison to men.

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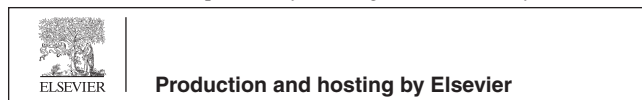
1. Introduction

In the current health care setting patient satisfaction is one of the main indicators. Assessment of patient satisfaction is a useful parameter to predict the quality and availability of health care services (Illana, 2003). Nowadays, the health care

sector is doing continuous efforts to ensure a higher consumer satisfaction. By doing so, one can identify the deficiencies in the delivery of healthcare services and intervene them to enhance patient satisfaction (Mira and Aranaz, 2000). However, it is hard to identify a single factor that is directly associated with a low or high level of patient satisfaction. A variety of factors might be involved in patient satisfaction process. Some of these are; patient demographics, health status, characteristics of the health care provider i.e. technical expertise, interest in patient oriented care and waiting time (Mira and Aranaz, 2000; Hall and Dornan, 1998). Furthermore, the patient satisfaction level is found to directly associate with the patient expectations (Mira and Aranaz, 2000; Hall and Dornan, 1998). In this way, one can define patient satisfaction as the sum of the patient expectation and perceptions toward the treatment or pharmaceutical service provided to them (Ikegami and Kawakita, 1987). If the perceived expectations are met, it will result in a satisfied patient. Otherwise, a poor satisfaction level can be seen if there is a higher variation in the expectance vs perception rate (Ichijo, 1987).

In the recent years, the traditional role of hospital pharmacist from a medicine dispenser has taken to the bedside care and pharmaceutical care planning. Furthermore, unlike past, a multidisciplinary team approach (i.e. physician, pharmacist, nurse and allied health care professionals) is adopted to treat patient. With the increase in the pharmacist job demands the patient expectation also increases. Previous literature was emphasizing more on the patient satisfaction from the physician perspective. However, the evaluation of consumers' satisfaction with pharmacy services is relevantly a new area for developing nations (Farris et al., 2000). A satisfied patient with the hospital pharmacy services will result in better patient communication, which will ensure better therapeutic outcomes later on (Aharony and Strasser, 1993).

Particularly seeing this issue in Saudi region, patient satisfaction has always remained a priority issue for the health care authorities. Furthermore, with the recent initiative of the Saudi health setup to attain "Joint Commission International (JCI)" accreditation has further increased the importance of patient satisfaction. Previous Saudi studies focusing on the patient satisfaction issue were more or less oriented to the physician or the health care setup (Al-Doghaither et al., 2003; Al-Doghaither and Saeed, 2000; Al-Faris et al., 1996). However, none of these surveys has assessed patient satisfaction with the pharmacy services. In Saudi scenario the JCI accreditation is at boom, therefore it is essential to document the consumer satisfaction level to improve the quality care in the Saudi health care setup. Particularly seeing the situation in Al-Ahsa (Eastern region), there is no such study that focuses on the patient satisfaction with the pharmacy services. The current study aims to assess the patient satisfaction with the pharmacy services provided to the patients at Al-Jaber, ENT hospital Eastern region, Alahsa, Kingdom of Saudi Arabia.

2. Material and method

A cross section study was designed to explore the patient level of satisfaction with the health care services provided by the hospital pharmacy, Al-Jaber ENT hospital, Eastern Region Alahsah from 1st March 2011 until 31st May 2011.

Table 1 Patients' demographics and information about their health status.

Demographics		N (%)
Age		
	[Mean Age = 32 SD 9.73]	
	[Range = 15–60 years]	
	15–20	29 (4.40%)
	21–25	170 (25.80%)
	26–30	145 (22.0%)
	31–35	106 (16.08%)
	36–40	83 (12.59%)
	41–45	66 (10.01%)
	46–50	32 (4.86%)
	51–55	15 (2.27%)
	56–60	10 (1.51%)
Gender		
	Male	383 (58.1%)
	Female	276 (41.9%)
Nationality		
	Saudi	561 (85.1%)
	Egyptian	58 (8.8%)
	Others	39 (5.9%)
Marital status		
	Single	252 (38.2%)
	Married	357 (54.2%)
	Divorced/separated	50 (7.59%)
Educational profile		
	Secondary school education	137 (20.8%)
	High school	199 (30.2%)
	Bachelor	145 (22.0%)
	Master	132 (20.0%)
	Not disclosed	46 (7.0%)

3.2. Study population

The respondents for this study were patients coming to fill the prescription on the pharmacy window of Al-Jaber ENT hospital. The sample size for this study was estimated using the online sample size calculator i.e. Raosoft® with a confidence interval of 95% and 5% margin of error. The minimum affective sample size for the study was 377. However, to reduce the sampling biases a total of N = 991 patients were approached for their potential participation in this study. Every third patient visiting pharmacy was given a chance to participate in this study. A total of N = 991 patients were randomized using the pharmacy appointment number. Of whom 657 patients did show willingness to participate in this study.

3.2.1. Validation of the study tool

The contents of the study tool were screened out for the appropriateness of the contents. After finalizing the contents of the tool, all the items were translated to Arabic language using a forward backward method. Face validity of the tool was done using a pilot study on a group of thirty respondents [*The pilot sample was not included in the study sample*], while to ensure the internal consistency of the tool reliability scale was applied, chronbach's alpha values for this study tool was 0.68.

Table 2 Information about the health status of respondents.

Statement	N (%)
How you will rate your health status	
Poor	283 (43.0%)
Moderate	328 (49.8%)
Good	48 (7.3 %)
What type of co-morbid medical complication you are suffering from	
Hypertension	116 (17.6%)
Diabetes mellitus	12 (1.8%)
Hypertension + Diabetes mellitus	11 (1.7%)
Sickle cell anemia	2 (0.3%)
Head ache	13 (2.0%)
Vertigo	9 (1.4%)
What type of current complication you are suffering from	
Nose	17 (2.6%)
Throat	30 (4.6%)
Eye	188 (28.5%)
Allergy	7 (1.1%)
Ear	23 (3.5%)
Mixed ENT complication	62 (9.4%)
What is the reason of your visit to hospital	
Seeking consultancy	132 (20.0%)
Check up	481 (73.0%)
Follow up	19 (2.9%)
Treatment + Medicine	27 (4.2%)

3.3. Contents of study tool

A self-administered 15-item questionnaire was used to attain the objective of the study. The study tool was comprised of three sections. *Section one* mainly focused on the demographic information of respondents. Respondents were questioned about five demographic factors i.e. age, gender, nationality, education and marital status (Table 1). The aim of *second section* was to inquire the respondents about their health status, comorbid medical complications and the reason for visit to Al-Jaber ENT center (Table 2). *Section three* was the core section of the study tool aiming to assess the patient satisfaction with the pharmacy services. Seven items were displayed in this section to attain the aim of this study. The first six items have covered the respondent's level of interaction with pharmacist (Table 3). While the seventh item further comprised of twelve sub items to evaluate the patient's level of satisfaction with the pharmacy services provided to them. A three item scale; *always, some times and not at all* was provided for the respondent's convenience to disclose their response. Details about the items solicited for this section are shown in Table 4.

3.4. Scoring of responses

In order to present the patient satisfaction in a measurable way, scoring of responses was done for the items mentioned

Table 3 Level of interaction of the patient with the pharmacist.

Statement	N (%)
Have you heard of a professional named as pharmacist in this hospital	
Yes	511 (77.6%)
No	108 (16.4%)
Not disclosed	40 (6.1%)
How you will rate the role of pharmacist in disease recovery and therapy	
Pharmacist has a major role in disease recovery	434 (65.9%)
Pharmacist has a minor role in disease recovery	156 (23.7%)
Pharmacist has no role in disease recovery	21 (3.2%)
Not disclosed	48 (7.2%)
How you will rate your interaction with the pharmacist	
Poor	402 (61.0%)
Moderate	193 (29.3%)
Good	42 (6.4%)
Not disclosed	22 (3.3%)
When you go to a hospital how often you interact with the pharmacist	
Always	256 (38.8%)
Some times	325 (49.3%)
Not at all	63 (9.6%)
Not disclosed	15 (2.3%)
When you attend a pharmacist in which language you would like to communicate	
English	93 (14.1%)
Arabic	566 (85.9%)
While attending a pharmacist you are more convenient with	
Saudi pharmacist	613 (93.0%)
Egyptian pharmacist	15 (2.3%)
Non-Arabic speaking pharmacist	31 (4.7%)

Table 4 Respondents' satisfaction with the pharmacy services.

S.No.	Statement	Always	Some times	Not at all
1	The pharmacy window or pharmacy area is noisy	167(25.3%)	413 (62.7%)	79(12.0%)
2	The pharmacist was willing to know more about my problem	182(27.2%)	328(49.8%)	148(22.6%)
3	Pharmacist has not asked me any question and has straight away dispensed the medicine	241(36.6%)	285(43.2%)	133(20.2%)
4	The language used by the pharmacist was easy and understandable	394 (59.8%)	168 (25.5%)	97(14.7%)
5	The pharmacist has explained the issues about the drug in local language i.e. Arabic	459 (69.7%)	149 (22.6%)	51(7.7%)
6	The voice and tone of the pharmacist was clear	406 (61.6%)	207 (31.4%)	46 (7.0%)
7	I was unable to understand information about the dose of the medicine	183(27.8%)	235 (35.7%)	241(35.6%)
8	The pharmacist was speaking too fast that limit my ability to understand the information provided	201(30.5%)	208 (31.6%)	250 (37.9%)
9	Pharmacist has explained me in detail about the side effects of the drugs	238 (36.1%)	240 (36.4%)	181(27.5%)
10	Pharmacist has taken details about my family and disease history before dispensing the prescription	185 (28.0%)	141 (21.4%)	333 (50.5%)
11	Pharmacist has done counseling for me about the right dose, time and drug–drug and drug food interactions	337 (51.1%)	194 (29.4%)	128 (19.4%)
12	Pharmacist was confident and he has explained the benefit of the drug that will help me to recover	316 (48.0%)	169 (25.6%)	174 (26.4%)

in section three (item number seven). Twelve items were presented for respondents to disclose their view with a three-item scale i.e. *always, some times and not at all*. Those selecting always were graded with 3 score and it present a higher level of satisfaction. While on the selection of second option i.e. sometimes, add a score of two to the total score of respondent. Upon the selection of last option, i.e. not at all adds a score of one to the respondent's total score. However, for some items (i.e. item number; seven and eight) reverse scoring was done (*always was graded as one, sometimes was graded as two and not at all was graded as three*).

The maximum possible score for these 12 items was 36; those scoring less than 20 were graded as poor satisfaction level followed by moderate satisfaction level 21–25, good satisfaction level 26–30 and high satisfaction level 31–36 (Fig. 1).

3.5. Data analysis

Statistical package for social science version 13® was used to analyze data, One-way ANOVA and independent sample t-test were applied to see the differences in the level of satisfaction. P-value less than 0.05 was considered statistically significant.

3.6. Ethical consideration

The research protocol was approved by the departmental research committee chaired by the vice-dean of the College of Clinical Pharmacy, King Faisal University. Furthermore, the research protocol was also approved by the deanship of scientific research, King Faisal University.

4. Results

The response rate of this study was 66.30%, most of the respondents 383 (58.1%) were male ranging from the age group of 21–40 years with a mean age of 32 years SD 9.73. A majority of the respondents 561(85.1%) were Saudi followed by Egyptians and others. High school education level 199 (30.2%) was seen among the majority of the respondents. Details about the demographic of the respondents are shown in Table 1.
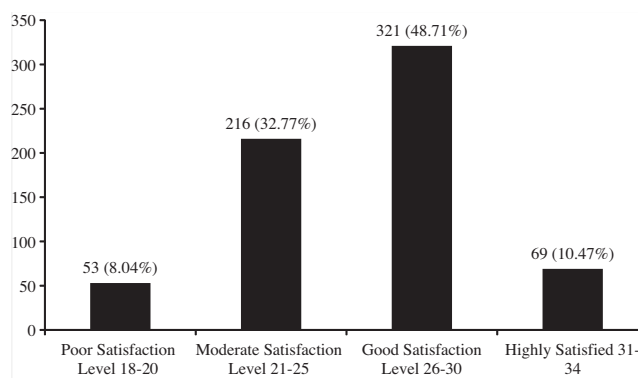

Figure 1 Categorical distribution of respondent's level of satisfaction.

Table 5 Satisfaction level differences among various groups.

Variables		Mean score = 26.0 ± 3.40 Range 18–34	P
Age			
	15–20	26.51 ± 3.05 ns	
	21–25	26.57 ± 3.21 ns	
	26–30	25.39 ± 3.48 ns	df = 8
	31–35	25.65 ± 3.01 ns	F = 8.36
	36–40	26.85 ± 3.82 ns	p = <0.001(s*)
	41–45	25.36 ± 2.95 ns	
	46–50	26.21 ± 2.97 ns	
	51–55	25.66 ± 2.12 ns	
	56–60	32.23 ± 2.77 (s*)	
Gender			
	Male	25.69 ± 3.46	t = -4.089
	Female	26.78 ± 3.21	df = 656
			p = <0.001(s*)
Nationality			
	Saudi	25.96 ± 3.47	df = 2
	Egyptian	27.87 ± 2.37	F = 8.47
	Others	26.17 ± 3.00	p = <0.001(s*)
Educational profile			
	Secondary school education	25.45 ± 3.30	
	High School	26.38 ± 3.31	df = 4
	Bachelor	26.30 ± 3.41	F = 2.056
	Master	26.14 ± 3.92	p = <0.085(ns)
	Not disclosed	26.73 ± 1.93	

4.1. Respondents health status and purpose of visit

Most of the respondents have graded their health status as moderate 328 (49.8%), followed by poor 283 (43.0%). Nearly 17.65% of the respondents have reported comorbid hypertension. Majority 188 (28.5%) were visiting the hospital due to eye and mix complications (Table 2), either to seek consultancy 132 (20.0%) or for checkup 481 (73.0%).

4.2. Patient interaction with pharmacist

It was surprising to see that only 511 (77.6%) have ever heard of pharmacist during their visit to hospital. In response to the question about the role of pharmacist in disease recovery, 434 (65.9%) of the respondents mention that pharmacists have major role in disease recover. However, it was amazing to see that 402 (61.0%) of the respondents have disclosed a poor interaction with pharmacist. In about, 566 (85.9%) of cases the language used during communication was Arabic. Most 613 (93.0%) of the respondents were found most convenient to communicate with Saudi pharmacist than the Egyptian and others (Table 3).

4.3. Respondent's level of satisfaction with the pharmacy services

Exploration of respondent's satisfaction with the pharmacy services reveals a moderate to good satisfaction level (Fig. 1). Majority disclosed that the pharmacy area was noisy. About 148 (22.6%) disclosed a lack of willingness from the side of pharmacist to know about their problem. Nearly 61.2% of the respondents mention that they did not understand the information provided by pharmacist. In addition, about 20–27.0% of the respondents remain deprived of the right drug information about the right dose/interaction and side effects of drugs (Table 4). Scoring of responses has shown that the mean satisfaction score for respondents was 26.0 ± 3.40 (Range 18–34). Satisfaction score was found variable among the groups particularly the age of respondents. Overall, it is seen that respondents aged 50–60 were found most satisfied with the pharmacy services with a mean score of 32.23 ± 2.77 (df = 8, F = 8.36, p = <0.001*). Similarly, there were significant differences in terms of nationality and gender (Table 5).

5. Discussion

In health care services, patient satisfaction is considered as one of the main factors that help the stakeholder to improve the quality of the health services. Globally, the criteria to measure the patient satisfaction vary markedly. Different cultural settings have different needs or expectation that affect the overall satisfaction with the health care services. To our knowledge, this was the first effort to evaluate the consumer view about the pharmacy services in Eastern Region, Kingdom of Saudi Arabia. The results of this patient satisfaction survey indicated that there was good consumer satisfaction with the pharmacy encounters. The items that received high satisfaction scores were pharmacist was always available, pharmacist provides thorough explanations/clear labeling of drugs, pharmacist's politeness, and prompt services (Kamei et al., 2001). Some of these items may not be strong factors influencing satisfaction in some other places.

An analysis of the influence of respondents' demographics showed that patient satisfaction was found affected with a variety of issues. i.e. the age of patients significantly affecting the level of satisfaction. It was seen that the old patients were more satisfied with the pharmacy services provided than the other age groups. These findings comply with other international studies that also report age as a main factor affecting the patient's level of satisfaction with the pharmacy service (Weiss, 1988; Hall and Durnan, 1990). In addition, other factors that were associated with the patient satisfaction were gender, nationality and education. Some international studies (Kamei et al., 2001) explore no difference in satisfaction between male and female. However, keeping in view the current findings it can be assumed that women may be more willing to know about their drugs from the pharmacist. This may be a reason for the higher level of satisfaction among female respondents of the current study. Future studies should explore the reasons for higher level of satisfaction with the pharmacy services among female patient. As a whole, it was surprising to notice a poor level of satisfaction among the Saudi patients. Overall, Egyptian patients were the most satisfied with the pharmacy services followed by the other expatriates. Unlike other studies (Kamei et al., 2001; Weiss, 1988; Hall and Durnan, 1990), the current study reports a low level of satisfaction among the patients with low educational background. While the satisfaction level was found improving as the education, level was improved. Further studies on pharmacy settings would be necessary to determine the exact impact of pharmacy related factors and their association with the patient's demographics and level of satisfaction.

6. Conclusion

Saudis were least satisfied with the pharmacy services than that of the Egyptian and others. Demographic factors like age, gender and education level were found associated with the increase or decrease in the satisfaction level.

7. Limitation

This study was performed at a single center only; therefore, the findings of this study cannot be generalized for the whole pharmacy services in the Alahsa region.

References

Aharony, L., Strasser, S., 1993. Patient satisfaction: what we know about and what we still need to explore. Med. Care Rev. 50, 49–79.

Al-Doghaither, A.H., Saeed, A.A., 2000. Consumers' satisfaction with primary health services in the city of Jeddah, Saudi Arabia. Saudi Med. J. 21 (5), 447–454.

Al-Doghaither, A.H., Abdelrhman, B.M., Saeed, A.A., Magzoub, M.E., 2003. Factors influencing patient choice of hospitals in Riyadh, Saudi Arabia. J. R. Soc. Promot. Health 123 (2), 105–109.

Al-Faris, A., Khoja, T.A., Muneera, F., Saeed, A.A.W., 1996. Patients' satisfaction with accessibility and services offered in Riyadh Health Centers. Saudi Med. J. 17 (1), 11–17.

Farris, K.B., Stenton, S.B., Samnani, M., et al., 2000. How satisfied are your patients? CPJ 133, 32–36.

Hall, J., Dornan, M., 1998. Meta-analysis of satisfaction with medical care: description of research domain and analysis of overall satisfaction levels. Soc. Sci. Med. 27, 637–644.

Hall, J.A., Durnan, M.C., 1990. Patient sociodemographic characteristics as predictors of satisfaction with medical care: a meta-analysis. Soc. Sci. Med. 30, 811–818.

Ichijo, K., 1987. J. Jpn. Hosp. Assoc. 9, 37–48.

Ikegami, N., Kawakita, H., 1987. J. Jpn. Hosp. Assoc. 7, 13–19.

Illana, F., 2003. La organización centrada en la satisfacción del paciente. Rev. Calid. Asist. 18 (5), 259–260.

Kamei, M., Teshima, K., Fukushima, N., Nakamura, T., 2001. Investigation of patients' demand for community pharmacies: relationship between pharmacy services and patient satisfaction. Yakugaku Zasshi. 121, 215–220.

Mira, J.J., Aranaz, J., 2000. La satisfacción del paciente como una medida del resultado de la atención sanitaria. Med. Clin. (Barc) 114, 26–33.

Weiss, G.L., 1988. Patient satisfaction with primary medical care. Evaluation of sociodemographic and predispositional factors. Med. Care 26, 383–392.