Practice Report

PATIENTS' SATISFACTION WITH PHARMACEUTICAL SERVICES AT TEACHING HOSPITALS, RIYADH, SAUDI ARABIA

Badreldin A Mohamed*, Abdullah H Al-Dogaither

إن رضى المريض هو المقياس الرئيسي لنوعية الخدمات الصحية بما فيها الخدمات الصيدلية. وتهدف هذه الدراسة إلى استكشاف العلاقة بين رضى المرضى ومستوى خدمات الرعاية الصيدلانية التي يتلقونها. وقد تكونت عينة الدراسة من 270 مريضاً تم اختيارهم بطريقة منتظمة من مستشفى الملك خالد الجامعي، وتم جمع البيانات عن طريق الاستبانة. وبلغ المتوسط العام للرضى عن الخدمات الصيدلية 2.19 نقطة من 4 نقاط. وقد كان التأخير في صرف الوصفة الطبية بسبب الازدحام، ونقص الفنيين، وعدم وجود خصوصية للاستشارات، وعدم تمكن الصيدلي من الوصول للطبيب المعالج للمريض. وكان الوقت اللازم لاستقبال الوصفة و كذلك الحاجز اللغوي بين الصيدلي والمريض هما أكثر عاملين ارتبطا بعدم الرضى. كما دلت النتائج أن الجنس والمستوى التعليمي والعمر هي أكثر العوامل أهمية في الاستدلال على الرضى، حيث سجلت الإناث، والمتعلمون تعليماً عالياً، والمرضى الشباب أعلى متوسط لدرجات الرضى. إن على الصيادلة تثقيف المرضى وزيادة وعيهم تجاه دور الصيدلي ومسؤولياته، حيث يمكن الحد من تأخير صرف الوصفات باستحداث برامج كمبيوتر تسمح للطبيب بإرسال وصفة الدواء مباشرة إلى الصيدلية وإمداد الصيدلية ببعض الفنيين المدربين.

Patient satisfaction is a key indicator of the quality of health services, including pharmaceutical services. This study aimed to explore the relationship between patients' satisfaction and the level of pharmaceutical care services received. The sample consisted of 270 patients selected systematically from King Khalid University (KKU) hospital. Data was collected through self-administrated questionnaire. The overall mean satisfaction with pharmaceutical services was 2.19 points out of a maximum of 4 points. The delay for dispensing prescription was due to overload, lack of technicians, inadequate privacy for counseling and pharmacists' lack of direct access to patients' physicians. Time taken to receive prescription and language barrier between pharmacist and patients were the most two factors associated with dissatisfaction. The results of log-linear analysis indicated that gender, education and age are the most important predictors, with females, higher educated and younger patients having the highest mean satisfaction score. Pharmacists need to educate and increase patients' awareness about their roles and responsibilities. Prescription delay could be reduced by introducing computer -based prescription writing and by providing pharmacy with trained technicians.

Key words : Pharmaceutical services, Satisfaction, Hospital, Socidemographics

Introduction

The rise of consumerism and the need for sensitive, easily administered measure of health care quality have spawned interest in the use of patient assessments to evaluate health care quality. The importance of studying patient satisfaction stems from the fact that knowing about health care services from patients viewpoint provides a key indicator of the quality of health care system. Patients' views of health services pint to the sources of deficiencies in the system and direct health professionals and administrators to take corrective actions (Mitike *et al*, 2003*;* Kaldenberg, 2001; Zemencuk *et al*, Sitzia and Wood, 1997). One of the factors that have led to the growing importance of patient satisfaction is increasing knowledge and awareness among patients. Consumers are now better educated better informed and their satisfaction or dissatisfaction is based on more objective criteria than ever before.

The pharmacy profession is increasingly encouraging pharmacists to offer pharmaceutical care to improve patients' health, rather simply dispensing medication(Hepler and Strand, 1990;

Department of Community Health Sciences, College of Apllied Medical Sciences, King Saud University, P.O. Box 10219, Riyadh 11433, Saudi Arabia.

* To whom correspondence should be addressed.

Schommer and Kucukarslan,1997). Pharmaceutical care activities include monitoring patients, symptoms, counseling patients about their medication, help resolve drug-related problems, facilitating communication with physicians and performing condition- and patient specific intervention when appropriate(Kroeger *et al*, 2001; Schommer, 1995). Commonly reported obstacles to implement pharmaceutical care include pharmacists' lack of training, confidence, communication skills and time in their busy practices (McDonough *et al*, 1997; Berger, 1997). There have been many studies of patient satisfaction with medical services in the Kingdom of Saudi Arabia(Doghaither *et al*, 2000; Al-Faris *et al*, 1998; Doghaither *et al*, 2001); but non-have investigated the quality of services provided by outpatient pharmacies. The purpose of this study was to determine patients' satisfactions of various factors associate with an outpatient pharmaceutical services at KKU hospital.

Methodology

Data was collected through self-administered questionnaire. Participation in the study was totally voluntary. Subjects were informed about the study objectives and procedures and that data collected will be used only for the stated research purposes. Patients were asked to indicate on a 4 - point Likert scale (1= strongly dissatisfied, 4 = strongly satisfied) the extent to which they satisfied or dissatisfied with each item. The questionnaire included 13 items related to satisfaction with pharmaceutical services. Those items were divided into three dimensions. Five items were related to attention, five related to communication information (verbal or written) and five related to pharmaceutical care. The questionnaire was then pilot tested and few changes were made in the sequence and wording of some questions before finally administering. A systematic random sample of 120 male from male pharmacy and a sample of 150 females from female pharmacy were selected. For every fifth adult Saudi patient aged 20 years and above who was picking up a prescription on the day of the interview was selected. The sample included only patients visiting the pharmacy more than once in the last three months.

The questionnaire included in addition to the sociodemographic characteristics of the patients and their satisfaction with the services offered, number of prescription drugs used in the last 3 months and waiting time and waiting for medication. A sample of 37 pharmacists was also selected to collected pharmacists' reasons for prescription delay.

Analysis of variance and Man-Whitney U test were used to examine the differences on the mean score of satisfaction within sociodemographic variables. The analysis of the factors most affecting satisfaction was investigated using log-linear model. For a particular log-linear model, if the P-values were higher than the level of significance, then the model was considered to satisfactory fit the data. The model selected was the simplest among those with satisfactory fit. A stepwise method was used to confirm the choice.

Results

The study sample consisted of 270 patients. The sample was composed of 120 male (45.1%) and 146 female (54.9%) with 162 married (61%) and 104 single (39%). Four questionnaires were eliminated from the analysis due to incomplete information. The majority of patients were governmental officers (31%) and most of the service recipients were less than 40 year old (64%). For education, (23%) reported they don't have any formal education, 19% were primary and intermediates school graduates, (29%) were high school graduates and (28%) were university and above. The majority of the patients were employees (53%), 20% laborers, 14% students and 13% unemployed. For income, 24% with low income (less than 3000 SR per month), while 29% with high level of income (more than 9000 per month).

Table 1 shows mean score for all services offered. The overall mean satisfaction score was 2.19. The mean satisfaction score for males was 1.94, while for females was 2.39. The highest satisfaction score was obtained for drug care factor (2.34), while the lowest satisfaction score was obtained for communication factor (2.06). For males, the lowest satisfaction score was obtained for patient communication factor (1.85), while the highest satisfaction score was reported for drug factor (2.07). For patient care factor, the highest satisfaction score was shown for 'courteous and friendly' (2.29), while the lowest satisfaction score was reported for 'spending adequate time with patient" (1.94). For communication factor, the highest satisfaction score was reported for 'written information provided are complete' (2.28), while the lowest satisfaction score

was obtained for 'language understand by patient' (1.89) and waiting for prescription (1.75). For drug factor, the highest satisfaction score was attained by 'prescription always filled correctly' (2.86), while the lowest satisfaction score was reported by 'proper explanation of medication use' (1.97).

Table 1: Mean satisfaction level for gender, the weighted mean for all services provided classified by different factors.

	Gender		
Factors	**Male**	**Female**	**Mean**
Patient care			
Personal attention given.	1.88	2.90	2.44
Respect need for privacy.	1.83	2.53	2.21
Courteous and friendly.	1.86	2.65	2.29
Spending adequate time with patient	1.76	2.10	1.95
Responding to telephone calls	1.89	2.17	2.04
Availability of staff	1.98	2.13	2.06
Mean	1.87	2.41	2.17
Communication			
Language understand by patient .	1.95	1.84	1.89
Improving adherence to prescription	1.78	2.60	2.23
Written Informtion provided are complete	2.04	2.48	2.28
Number of refill indicated in Rx-label	1.78	2.40	2.12
Waiting time for prescription is convenient.	1.71	1.79	1.75
Mean	1.85	2.22	2.06
Drug care			
Explain incidence of drug- related toxicities	1.80	2.13	1.98
Explanation of proper medication use	1.82	2.09	1.97
Explain medication effects and side effects	1.94	2.89	2.46
Availability of prescription medication.	2.03	2.72	2.41
Prescription always filled correctly	2.76	2.95	2.86
Mean	2.07	2.56	2.34
Over all mean	1.94	2.39	

Table 2: Mean satisfaction score for sociodemographic variables.

Factors	**Patient care**	**Commu-nication**	**Drug care**
Gender			
Male	1.87	1.85	2.07
Female	2.41	2.22	2.57
Marital status			
Single	2.15	2.07	2.45
Married	2.16	2.09	2.51
Education			
Illiterate	2.10	2.00	2.21
Elementary and intermediate	2.12	2.01	2.29
Secondary	2.14	2.12	2.26
University+	2.27	2.22	2.53
Occupation			
Government employee	2.07	2.18	2.31
Student	2.32	2.15	2.31
Manual labor	2.04	1.95	2.34
Unemployed	2.01	1.91	2.37
Age			
20 - < 35	2.21	2.06	2.40
35 - < 50	2.15	2.30	2.33
< 50	2.11	1.93	2.26
Income			
< 3000	2.13	2.12	2.36
3000 - < 6000	2.15	2.06	2.26
6000 - < 9000	2.22	2.10	2.34
< 9000	2.10	2.02	2.26

Table 3: Reasons given by pharmacists for prescription delay

Variables	**%**
1- Lack of employees	88
2- Computer system	36
3- Preparation of medication	74
4- Increasing number of patients	88
5- Prescription writing process	41

Variable	Number of patients (%)
Waiting time	
15 minutes	35 (13)
30 minutes	124 (46)
Hour or more	111 (41)
Waiting for medication	
Yes	186 (69)
No	84 (31)

Table 5: Stepwise five-way log-linear model in which indices are gender (G), Age (A), marital status (M), education (E) and occupation (O)

Model	G^2	p- value	χ^2	p-value
G, E, A	4.19	0.073	4.27	0.068
GO, AE	2.16	0.143	1.29	0.094
OA, GE	5.18	0.048	4.87	0.029
GA, OE	2.81	0.012	3.05	0.146
GO, GE, AE	3.47	0.086	2.87	0.047

Table 2 shows mean satisfaction score for pharmaceutical services according to sociodemographic variables. For patient care factor a significant difference was observed for all variables except marital status, occupation and income. A substantial difference was shown between males and females. Females were more satisfied (2.41) than males (1.87). Elderly patients showed a lower level of satisfaction (2.11) than other groups and patients with higher educational level reported high level of satisfaction (2.17) compared to other groups. For communication factor, a significant difference was observed only for gender, education and occupation. Females were more satisfied (2.22) than males (1.85), students (2.15) and highly educated patients were more satisfied than other groups. For drug care factor a significant difference was observed for gender, education and age. Females were more satisfied (2.40) than males (1.93). Highly educated (2.26) and younger patients (2.26) were more satisfied than other groups.

Major reasons given by pharmacist for prescription delay is shown in table 3. The main reasons were lack of employees, increasing number of patients and preparation of medication. Patient personal data is shown in table 4. More than 40% of the patients waited more than an hour to receive their medication. Around 30% preferred to come back later rather than waiting for a long time. Table 5 shows the result of log-linear model for sociodemographic variables, predictors for satisfaction services provided. The choice of the model seemed unambiguous: only four models had satisfactory fit at 0.05 level of significance (G, E, A; GO, AE; OA, GE; GA, OE; GO, GE, AE). The simplest one was the G, E, A model with main effects.

Discussion

Considerable research supports using satisfaction ratings to measure quality of care from the patients perspective. Previous studies in pharmacist explicitly demonstrated the reliability and validity of the rating items and scales used in this research(Larson *et al*, 2002). Patient satisfaction studies have provided important information on several aspects of health services such as determining how and to what extent satisfaction influences, whether a person seeks health advice and complies with the professional measures prescribed in addition to giving some indication about the quality of services provided by outpatient services, such studies help providers better understand the patient views and making use of them in planning, controlling and delivering the services(Kaldenberg, 2001; Sitzia and Wood, 1997; Larson *et al*, 2002; Becky and Ron, 1997). We are aware that some patient opinions, beliefs and suggestions may be wrong themselves or that some patient may not be telling the truth as has been reported in some studies, the successful health administrator and planner should also deal with the consumers prejudices and not only with the providers views(Singhal *et al*, 1999; Abd Alkareem *et al*, 1996).

The overall mean satisfaction score was 2.19 (55%). Our findings are comparable to few studies and lower than other studies examining the relationship between pharmaceutical care behaviors and patient satisfaction particularly in similar Arab culture(Abd Alkareem *et al*, 1996; Salah, 2001). This difference could be genuine and might be

explained by the fact that patient satisfaction with pharmaceutical care services is one of the few dimensions of the multidimensional concept of patient satisfaction with pharmacies that pharmacists can directly affect. Pharmacist may have little influence over some of the other dimensions, such as drug availability, physical location of pharmacy, convenient work hours and waiting area.

The results indicated that female patients tended to experience satisfaction with most of the pharmaceutical services. This trend was likely to be the result of the more courtesy that is naturally given to females than males(Abd Alkareem *et al*, 1996; Salah, 2001). It is also quite likely that the pharmacist acted in consonance with Saudi cultural etiquette that tends to treat women respectfully than men in various public and social circumstances. This belief is consistent with other medical services research showing that provider behaviors influence satisfaction(Mitike *et al*, 2003; Sitzia and Wood, 1997).

The need to care and the need to communicate are both essential aspects of the process of pharmacy. Pharmacist need to listen to patients and converse with them. This is of paramount importance in securing their compliance(Odedina, 1995; Puneet, 2002; Mark, 2001). This is difficult to perform with pharmacist facing language barrier. The slight majority of pharmacists were non-Saudi coming from different countries and culture, some are from Non-Arabic speaking countries, which hinders fluent communication with patients. This suggest recruiting pharmacist from the Kingdom or Arab-speaking countries in the long run. Establishment of continuing education programs in communication skills and intensive Arabic language lessons for Non-Arabic speaking pharmacist are proposed to be short-term solutions. Additionally, the existing curricula of pharmacy need to incorporate courses in communication and inter-personal skills.

Counseling from pharmacists was the most effective way to obtain information about medications. Counseling will help to detect medication errors before patient leave the pharmacy and allow previously overlooked mistakes to be noticed. Counseling promotes patients compliance with prescription regimens and prevents dangerous drug interactions and medication errors(Schommer, 1995; Nau *et al*, 1997; Schneider and Nicman, 1994). The most common complains about counseling, in particular males, were lack of pharmacist interaction, lack of instruction and inadequate explanation of printed materials. While patients felt that individual contact with pharmacist was important, about 60% reported having very little contact. Pharmacist viewed counseling as integral to their job, several obstacles prevented counseling on a consistent basis. The most frequent obstacles were time and counseling space(Schommer, 1997; Thompson, 1995; Mowen *et al*, 1993; Thompson, 1996). This may take 5 to 10 minutes per patient and this is not possible due to demands associated with dispensing medication an issue being exacerbate by the increased number of prescriptions pharmacists are expected to fill to too high of a dispensing workload. To allow for more time for counseling would be to provide the pharmacy with more technicians who are trained to support pharmaceutical care. Finding times that would be mutually convenient for pharmacists and customers could help alleviate both the lack of time and lack of private space. One strategy would be to set an appointment for a brief telephone counseling session at a time that is mutually convenient for pharmacists and patients. About 14% of the pharmacists reported a poor and an incomplete prescription order-writing. Pharmacist reporting difficulty reaching physicians for clarification. They often lack physicians' telephone numbers, even when they had this information they complained that they could not speak directly with physicians(Sweeney, 2002; Tricia, 2000; Tissot *et al*, 1999).

Since the sample included patients who are frequent visitors to the pharmacy, it can be expected that such people can be more critical to the waiting and crowdidness of the facility. The finding that nearly all patients have to wait for more than 30 minutes to receive their medicine is rather not acceptable. Mowen *et al* (1993) reported that satisfaction levels were higher when consumers were told how long they would have to wait. This finding was not supported in this study as about 32% prefer to come back later to receive their medicine rather than waiting for a long time. The flow of the work is not steady. The pharmacy sometimes receives a large number of prescriptions in a very short period of time (average of 600 prescription per day). Unfortunately, most of this heavy flow of prescriptions happens during the lunch hour in which most of the pharmacist are a way for a break, this accounts for the delay in processing prescriptions

especially those needs extra work like compounding. Clinics don't have coordination among each other, which indeed could contribute a great deal to increasing the delay, as well as, the crowdidness of patients.

The rate of patients who come to the KKU hospital for medical attention and the under staffing of the pharmacy are the main reasons behind the delay. The computer system and the medicine preparation procedures at KKU are two more factors that can be considered as reasons for the delay. The use of computers system has been shown to increase the efficiency of the prescription dispensing process(Miller *et al*, 1993; Murray *et al*, 1998). However, computer downtime causes major difficulties because patient medication profiles cannot be easily retrieved and prescription labels cannot be generated. Murray *et al* (1998) found that computer-based outpatient prescription writing by physicians reduced the time pharmacists spent processing prescriptions, provided more time for communicating with patients , decreased number of staff required to handle the workload and reduced interactions with physicians.

Consistent with the literature, we found a relationship between patient satisfaction with pharmaceutical services and patient sociodermographic variables (Schommer *et al*, 1997; Mark *et al*, 2001; Becky and Ron, 1997; Hall and Dornan, 1990;) . Previous studies showed that less educated patients were much more satisfied than the more educated (Becky and Ron, 1997; Hall and Dornan, 1990). In contrast, our study showed that educated patients are more satisfied. This could be explained by the fact that pharmacist provide patients with written instructions when they dispense drugs. In addition, some pharmacist are non-Arabic speaking. This may cause communication barrier between them and the uneducated. This finding calls for employing Arabic speaking pharmacists. In addition to intensive programs of training on proper dispensing and good communication with patients, in particular the uneducated. For the present study age was consistently related to satisfaction, which is consistent to several other studies(Schommer and Kucukarslan, 1997; Hall and Dornan, 1990; XU KT, 2002), which showed that older subjects are less satisfied with pharmaceutical services. Only 59% of the older patients rated the services as satisfied. This is relatively low figure compared to other studies(Mitike *et al*, 2003; XU KT, 2002). Time spend in the waiting room was the worst problem that old patients complained from. Thompson et al found that perception of waiting time is a much stronger correlate of satisfaction than actual wait time. As can be seen patients socio-demographic variables have been studied in several communities but their relation to opinions and attitudes and their association with satisfaction have been rather inconsistent.

Several factors are associated with the positive attitudes and satisfaction of patients with the pharmaceutical services. In this study patients viewed pharmacist counseling as the most important service offered at the outpatient pharmacy. Brief telephone counseling, providing a separate area for private counseling and recruiting more trained technicians were the needed services that will help to reduce patient waiting time and result in improved patient satisfaction. An educational program for all consumers is needed to inform them about their roles and responsibilities.

References

1. Abd alkareem A, Aday L, Waker G.1996 Patient satisfaction in government health care facilities in the state of Qatar. J Community Health 1996; 21, 349- 58.
2. Aldoghaither AH, Saeed AA, Badreldin AM. Satisfaction and correlates of patient satisfaction with primary health care centers in Riyadh, Saudi Arabia. Qatar Medical J 2001;34-38.
3. Al-Faris E, Khja T, Faloud M, Saeed AA. Patients' satisfaction with accessibility and services offered in Riyadh health centers. Saudi M J 1998; 11 – 17.
4. Berger BA, Grimley D. Pharmacists' readiness for rendering pharmaceutical care. Pharm Assoc 1997; 37, 535-42.
5. Briesacher B, Corey R. Patient satisfaction with pharmaceutical services at independent and chain pharmacies. Am J Health Syst Pharm 1997; 54, 1079-2082
6. Kaldenberg DO. Patient satisfaction and health status. Health Mark Q 2001; 18, 81-101.
7. Kroeger A, Ochoa H, Arana B, Diaz A, Rizzo N, Flores W. Inadequate drug advice in the pharmacies of Guatemala and measure the scale of the problem and explanatory factors. Ann Trop Med Parasitol 2001; 95,605-16.
8. Hall JA, Dornan MC. Patient sociodemographic characteristics as predictors of satisfaction of satisfaction with medical care: a meta-analysis. Soc Sci Med 1990; 30, 811-8.
9. Hepler CD and Strand LM. Opportunities and responsibilities in pharmaceutical care. Am J Hosp Pharm 1990; 47, 533-43.
10. Mark RA, Michael DM, William MT, Nancy B, Lisa EH, David GM, and Morris W. Pharmaceutical care in chain pharmacies: beliefs and attitudes of pharmacists and patients. J Am Pharm Assoc 2001; 41, 850-55.

11. Mcdonough RP, Rovers JP, Currie JD. Obstacles to the implementation of pharmaceutical care in the community setting. J Am Pharm Assoc 1997;38, 87-95.
12. Miller DA, Zarowitz BJ, Petitta A, Wright DB. Pharmacy technicians and computer technology to support clinical pharmacy services. Am J Hosp Pharm 1993; 50, 929-34.
13. Mitike G, Mekonnen A, Osman M. Satisfaction on outpatient services in hospitals of Amhara region. Ethiop Med J 2003; 40, 387-96.
14. Mowen JC, Licata JW and Mcphail J. Waiting in the emergency room: How to improve patient satisfaction. J Health Care Mark 1993; 1, 26-33.
15. Murray MD, Loos B, TU W, Eckert L, Zhou XH, Tierrney WM. Effects of computer- based prescribing on pharmacist work pattern. J Am Med Inform Assoc 1998; 5, 546-53.
16. Nau DP, Ried LD and Lipowski E. What make patients think that their pharmacists' services are of value? J Am Pharm Assoc 1997; 37, 91-8.
17. Odedina FT. Providing Pharmaceutical care in community practice: difference between providers and non-providers of pharmaceutical care. J Soc Admin Pharm 1995; 12,170-80.
18. Puneet KS,Gireesh VG, Dennis WR, Jon CS, Mark TH. Impact of pharmacists' directive behaviors on patient satisfaction. J Am Pharm Assoc 2002; 42,407-11.
19. Reid LD, Wang F, Young H, Awiphan R. Patient satisfaction and their perception of the pharmacists. J Am pharm Assoc 1999;39, 835-42.
20. Salah MM, Khairo AD, Mohammed JN, Raeda JA. Patient expectation and satisfaction in different hospitals in Irbid, Jordan. Saudi Med J 2001; 22,625-29.
21. Schneider JK, Nickman NA. Assessment of pharmaceutical care needs in an ambulatory setting hospital pharmacy 1994; 29, 238-42.
22. Schommer JC. Higher level of consultation services creases patient satisfaction. Am Pharm 1995; 35, 33-9.
23. Schommer JC. Patients' expectations and knowledge of patient counseling services that are available from pharmacies. Am J Pharm Educ 1997; 8, 402-6.
24. Schommer JC, Kucukarslan SN. Measuring patient satisfaction with pharmaceutical services. Am J Health Syst Pharm 1997; 54, 2721-32.
25. Singhal PK, Raisch DW, Gupchup GV. The impact of pharmaceutical services in community and ambulatory care settings: evidence and recommendations for future research. Ann Pharmacother 1999; 33, 1336-55.
26. Sitzia J, Wood N. Patient satisfaction: a review of issues and concepts. Soc Sci Med 1997; 45,1829-43.
27. Sweeney MA. Physician pharmacist collaboration: a millennial paradigm to reduce medication errors. J Am osteopath Assoc 2000; 102, 678-81.
28. Thompson DA, Yarnold PR. Relating patient satisfaction to waiting time perceptions and expectation: the disconfirmation paradigm Acad Emer Med 1995; 2,1057-62.
29. Thompson DA, Yarnold PR, Williams DR. Effects of actual waiting time, perceived waiting time, information delivery and expressive quality on patient satisfaction in emergency department. Ann Emerg Med 1996; 28, 657-650.
30. Tissot E, Henon T, Cornette C, Jacquet M. Incomplete prescription: a potential medication error, presse Med. 1999; 28, 625-8.
31. Tricia AM. Improving the quality of the order-writing process for inpatients orders and outpatient prescriptions. Am J Health-Sys Pharm 2000; 57, 518-22.
32. Xu KT. Choice of and overall satisfaction with pharmacies among a community-dwelling elder population. Med Care 2002;40, 1283-93.
33. Zemencuk J, Hayward R, Skarupski K, Katz S. Patients' desires and expectations for medical care: a challenge to improving patient satisfaction. Am J Med Qual 1999; 14, 21-27.