



Evaluation of Patient Satisfaction in Outpatient Pharmacy

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Abstract

Objective: To establish the level of satisfaction and dissatisfaction with the service received by patients attending the Outpatient Pharmacy regarding the care received.

Method: Two-month long cross-sectional study. The study included all patients who had attended the Outpatient Pharmacy (OP) and had given their consent. Satisfaction was measured using a previously validated survey (Likert-type scale), with 5 possible closed answers (1: disagree, and 5: strongly agree) and the satisfaction index established by the Regional Ministry of Health for the Autonomous Community of Valencia. Dissatisfaction was assessed via the complaints received by the Patient Service Department over the last 10 years.

Results: Patient satisfaction survey ($n_{\text{final}}=138$). Overall satisfaction index (SI), 76% (95% CI, 72-80). Greatest satisfaction, pharmacist's skills (SI, 88%; 95% CI, 87-88). Lowest satisfaction: dispensing area (SI, 63%; 95% CI, 60-66) and dispensing process (SI, 68%; 95% CI, 67-70). Complaints ($n=22$). Reasons for dissatisfaction: dispensing process (72%) and dispensing area (10%).

Conclusion: Although the satisfaction index is a useful indicator for identifying improvements, the reasons for dissatisfaction are also required as a complement to this information. Those aspects in need of improvement are the dispensing area and process and increased structural and human resources are required.

Key words: Patient dissatisfaction. Patient satisfaction. Outpatient. Care quality.

Evaluación de la satisfacción y de la insatisfacción de pacientes atendidos en la unidad de atención farmacéutica a pacientes externos

Objetivo: Conocer tanto el grado de satisfacción como los motivos de insatisfacción de los pacientes que acuden a la Unidad de Atención Farmacéutica a Pacientes Externos (UFPE) respecto a la atención recibida.

Método: Estudio transversal de dos meses de duración. Se incluyeron todos los pacientes atendidos por la UFPE que dieron su consentimiento. La satisfacción se midió con una encuesta previamente validada, de tipo Likert, con 5 posibles respuestas cerradas (1: en desacuerdo, y 5: muy de acuerdo), utilizándose el indicador *índice de satisfacción* establecido por la Conselleria de Sanitat de la Comunidad Valenciana. La insatisfacción se evaluó a través de las quejas formuladas en el Servicio de Atención e Información al Paciente en los últimos 10 años.

Resultados: encuesta de satisfacción ($n_{\text{final}} = 138$). Índice de satisfacción (IS) global: 76% (IC 95%: 72-80). Mayor satisfacción: *habilidades del farmacéutico* (IS: 88%; IC 95%: 87-88). Menor satisfacción: zona de dispensación (IS: 63%; IC 95%: 60-66) y proceso de dispensación (IS: 68%; IC 95%: 67-70). Reclamaciones ($n = 22$). Motivos de insatisfacción: proceso de dispensación (72%) y zona de dispensación (10%).

Conclusiones: Aunque el índice de satisfacción es un indicador útil para poder establecer mejoras, es necesario conocer también los motivos de insatisfacción como complemento a esta información. Los aspectos a mejorar son la zona y el proceso de dispensación, siendo necesario un aumento de los recursos estructurales y humanos.

Palabras clave: Insatisfacción del paciente. Satisfacción del paciente. Pacientes externos. Calidad asistencial.

INTRODUCTION

Satisfaction is one of the 9 dimensions of quality and patient satisfaction levels therefore indicate the quality of healthcare services and the care received by the patient.¹ They may therefore be used as means of evaluating healthcare services in general.²

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Patient satisfaction is related to a high number of variables, such as their state of health, socio-demographic variables (age, sex, and cultural level), characteristics of their healthcare provider (affective care, quantity of information, technical expertise, etc), or waiting times. There is a high correlation between patient expectations and their level of satisfaction and it is important to recognise patients' initial expectations.^{2,3} In this way, patient satisfaction is defined as the correspondence between their expectations and final perception of the healthcare service provided.⁴ Patient satisfaction surveys are the most commonly used method of measuring patient satisfaction in Outpatient Pharmacies. The surveys are used to establish the patient's opinion on different aspects which may influence their final perception of the treatment or pharmaceutical service provided.

However, none of these surveys assesses patient dissatisfaction. This is a poorly studied and yet important aspect that supplements information on patient satisfaction, so that improvements that do actually improve the quality of the services offered may be implemented. Dissatisfaction may be defined as the lack of correspondence between patient expectations and their final perception of the healthcare service provided. Studies evaluating patient dissatisfaction are normally based on complaints made by patients.⁵ However, the reasons for the complaints are not classified and it is therefore difficult to compare the different services or confirm the efficacy of any improvements made.

The present study was carried out taking into account the above aspects in order to establish patient satisfaction levels as well as the reasons for dissatisfaction, in terms of the care provided, among patients attending the Outpatient Pharmacy (OP).

The secondary objective of the study was to identify those aspects of the OP that required improvement.

METHOD

A 2-month cross-sectional study was carried out in order to establish patient satisfaction levels. During this period, a patient satisfaction survey was sent out with a stamp addressed envelope so that, once completed, the patient could return it to the Pharmacy Department free of charge. The study included patients who accepted to receive the survey when their drugs were dispensed at the OP of the Hospital Pharmacy Department. Figure 1 shows an example of the patient satisfaction survey used.⁶ Patients who were just starting treatment or were attending the OP for the first time, as well as those patients who refused to participate were excluded from the study.

Patient opinions were assessed using a Likert-type ordinal scale,⁷ with 5 possible closed answers (1: strongly disagree; 2: disagree; 3: not sure; 4: agree; 5: strongly agree). After obtaining a mean value for each patient from the surveys, patient satisfaction was measured using the patient satisfaction indicator established by the Regional Ministry of Health for the Autonomous Community of Valencia, known as the satisfaction index (SI= $X-1/Max-1$), where **X** is the mean satisfaction value and **Max** is

the maximum value on the satisfaction scale (Max=5 in this case).⁸

To establish the reasons for patient dissatisfaction, complaints made by patients attending the OP between 1997 and 2007 and sent to the Patient Service Department of the hospital were gathered. The reasons for complaint were grouped according to the classification system created by Pichert et al,⁹ as well as to the items described in the patient satisfaction survey. Both systems were then analysed to find out which one allows us to better identify the reasons for complaint and compare them with the patient satisfaction survey used.

The OP serves patients with a total of 22 pathologies, with 40% of the total patients receiving treatment for HIV. An analysis was therefore carried out per subgroup (HIV and non-HIV) to evaluate whether pathology influenced patient satisfaction and/or dissatisfaction with the pharmaceutical service provided.

Aspects within the OP which required improvement were identified using the results obtained from measuring the level of patient satisfaction and the reasons for dissatisfaction outlined in the complaints received.

Statistical Analysis

The items included in the survey were assessed using an ordinal numerical scale, taking into account quantitative variables. These were therefore studied based on their distribution and dispersion measurements (mean and standard deviation). To evaluate the differences in the analysis according to subgroup (HIV compared to non-HIV), homogeneity tests were carried out using the z-contrast statistic. A *P* value less than .05 was considered significant and 95% confidence intervals were used in all cases.

RESULTS

The patient satisfaction survey was sent to 302 patients (160 HIV and 140 non-HIV) during the study period, representing 49.6% of the patients who attended the Outpatient Pharmacy during this period.

A total of 138 surveys were returned (91 HIV and 47 non-HIV), thus representing 40% of the surveys sent out.

The results obtained from the patient satisfaction surveys (Table 1) show a satisfaction index of 76%. On analysing per subgroup, no differences were found between both groups and the satisfaction index was 75% in both cases. The most valued aspects were pharmacist's skills and confidentiality and assistance to patients. The most poorly valued aspects were related to the dispensing area and process.

The reasons for complaints sent to the hospital Patient Service Department (PSD) by patients who had been served in the OP are shown in Tables 2 and 3. In Table 2 the reasons for complaint are classified according to items defined by Pichert et al. Table 3 shows reasons for complaints grouped according to the items included in the patient satisfaction survey and an increased number

Indicate 1 to 5 on the scale for the answer that most corresponds to your opinion.				
1. Strongly disagree	2. Disagree	3. Not sure	4. Agree	5. Strongly agree
<p>Dispensing area and process:</p> <ul style="list-style-type: none"> The waiting room is adequate The dispensing area is easily accessible The temperature is adequate The opening hours are sufficient The time taken to serve you is reasonable The pharmacist is willing to answer any questions I may have 				
				1 2 3 4 5
				1 2 3 4 5
				1 2 3 4 5
				1 2 3 4 5
				1 2 3 4 5
<p>Personnel's skills:</p> <ul style="list-style-type: none"> The pharmacist is always friendly The pharmacist is always willing to help if I have any doubts concerning my medication The pharmacist allocates sufficient time for my needs El farmacéutico está dispuesto a contestar a mis preguntas 				
				1 2 3 4 5
				1 2 3 4 5
				1 2 3 4 5
				1 2 3 4 5
<p>Confidentiality and assistance to patients:</p> <ul style="list-style-type: none"> I trust the pharmacist and their professionalism I feel better once I have spoken to the pharmacist The pharmacist asks me if I am seeing better results with the medication The pharmacist asks questions to ensure that the medication is effective The pharmacist solves any problems I may be having with the treatment 				
				1 2 3 4 5
				1 2 3 4 5
				1 2 3 4 5
				1 2 3 4 5
<p>Explanations and assessment of my state of health:</p> <ul style="list-style-type: none"> The pharmacist explains how to take my medication The pharmacist explains how the medication works and its effects I can tell the pharmacist about any problems I may be having The pharmacist informs me of the adverse effects associated with my medication I have concluded along with the pharmacist that the medication will have positive results The pharmacist asks about any changes to my state of health since my last visit 				
				1 2 3 4 5
				1 2 3 4 5
				1 2 3 4 5
				1 2 3 4 5
<p>General satisfaction:</p> <ul style="list-style-type: none"> I am happy with the service provided in the pharmacy There are aspects of the pharmacy service that may be improved I receive an excellent pharmacy service 				
				1 2 3 4 5
				1 2 3 4 5
				1 2 3 4 5

Figure 1. Sample of patient satisfaction survey used.

Table 1. Results of the Satisfaction Study for Patients Attending the Outpatient Pharmacy (2004)^a

Items	Total (n=138)		HIV Patient (n=90)		Non-HIV Patient (n=48)	
	Mean ^b	SI ^c	Mean ^b	SI ^c	Mean ^a	SI ^c
1. Dispensing area	3.52 (0.75)	0.63 (0.60-0.66)	3.55 (0.74)	0.64 (0.59-0.68)	3.83 (0.05)	0.71 (0.66-0.75)
2. Dispensing process	3.75 (0.32)	0.68 (0.67-0.70)	3.75 (0.59)	0.68 (0.64-0.73)	3.75 (0.58)	0.69 (0.64-0.73)
3. Pharmacist's skills	4.52 (0.04)	0.88 (0.87-0.88)	4.51 (0.03)	0.87 (0.86-0.87)	4.47 (0.26)	0.87 (0.83-0.90)
4. Confidentiality and assistance to patients	4.24 (0.19)	0.80 (0.79-0.81)	4.23 (0.18)	0.80 (0.77-0.84)	4.17 (0.26)	0.79 (0.75-0.83)
5. Information provided to patient and assessment of their state of health	4.01 (0.22)	0.75 (0.74-0.76)	4.02 (0.22)	0.76 (0.71-0.80)	3.77 (0.30)	0.69 (0.64-0.74)
6. Overall satisfaction	4.18 (0.31)	0.79 (0.78-0.81)	4.28 (0.28)	0.82 (0.78-0.86)	4.16 (0.36)	0.79 (0.75-0.83)
Total	4.04 (0.36)	0.76 (0.72-0.80)	4.05 (0.36)	0.76 (0.72-0.80)	4.02 (0.29)	0.75 (0.71-0.80)

^aSI indicates satisfaction index.

^bMean with standard deviation.

^cSI=X-1/4; where X is the mean satisfaction, with a 95% confidence interval.

The χ^2 test was carried out, with no differences between the SI for HIV and non-HIV patients.

Table 2. Reasons for Complaints Made by Patients Who Had Attended the OP and Submitted to the PSD, Grouped According to Pichert et al's Classification (1997-2007)

Aspects	No. of Reasons for Complaint (22 Claims)		
	Total	HIV	Non-HIV
Diagnosis and treatment			
Professional competence deemed insufficient	2	2	-
Short time between dispensing	1	-	1
Pharmacist-patient communication			
Inadequate or lack of information	3	3	-
Pharmacist-patient relationship			
Impolite	2	2	-
Renunciation of individual pharmaceutical intervention	2	2	-
Accessibility and availability			
Difficulties accessing the pharmacy	1	1	-
Delays or difficulties in obtaining an appointment	11	10	1
Appointment changes with no reason	1	1	-
Limited consultation hours	9	7	2
Total	32	28	4

of reasons may be observed for the same number of complaints. The number of complaints has increased over the last 10 years and 60% more complaints have been made in the last 2, with 4 in 2005, another 4 in 2006, and 7 complaints in 2007 (until May).

DISCUSSION

Patient satisfaction with services provided should be considered as an outcome measure of the care provided which helps improve the quality of the healthcare service rendered. The increasing number of patient satisfaction surveys has been widely criticised, given that only a few are based on any theoretical model and offer information on their internal consistency, sensitivity, and ability to discriminate between satisfied and dissatisfied patients. Unlike other published works,^{10,11} the present study used a patient satisfaction survey that had been validated and used by other work groups,¹² thus providing greater validity to the results obtained. However, both our survey and those used in the previously mentioned works, pose problems in that they use statements or propositions upon which the individual must comment, there are no options for the patient to express their dissatisfaction nor to measure this at the same time.

A possible limitation of this satisfaction study is the sample size, which may not be very representative and may pose problems in terms of generalising the results. Nonetheless, the participation level was as expected for surveys that are completed at a later date, which is between 8%-60%.¹³ It also helps identify those aspects requiring improvement.

The results obtained show the high patient satisfaction index for the services provided by the OP within the Hospital Pharmacy Department. The fact that no significant differences were observed in satisfaction levels between HIV and non-HIV patients in relation to the OP operation indicates that the processes within the OP regarding patients' care meet their needs based on their pathology.

As regards the measuring of dissatisfaction, classifying the reasons for complaints according to the items included in the satisfaction survey enables the identification of more reasons for complaints than the classification used by Pichert¹⁴ and modified by Mira et al.⁹ It also facilitated a comparison of these reasons for dissatisfaction with the results obtained in the patient satisfaction survey and the subsequent identification of aspects requiring improvement.

Quantitatively speaking, the definition used for dissatisfaction indicates that this can not be considered complementary to satisfaction, ie, 75% satisfaction does not mean that the dissatisfaction levels are 25%. It is therefore necessary to find specific tools to measure patient dissatisfaction. Dissatisfied patients probably do not participate in satisfaction studies and the results of these studies do not state the reasons for dissatisfaction among patients who are generally satisfied with the service. This may be observed when analysing the results of the surveys along with those obtained from complaints made to the PSD. On the one hand, the patient satisfaction surveys showed that the pharmacist's skills was the most valued aspect, which may be interpreted as recognition of the pharmacist's technical expertise and professional attitude. On the other hand, the pharmacist's professional competence (including information given to the

Table 3. Reasons for Complaints Made by Patients Attending the OP and Submitted to the PSD, Grouped According to the Items on the Patient Satisfaction Survey (1997-2007)

Items on Patient Satisfaction Survey	No. of Reasons for Complaint (22 Claims)		
	Total	HIV	Non-HIV
Dispensing area			
Waiting room	4	4	-
Dispensing process			
Consultation hours	9	7	2
Waiting times	6	6	-
Consultation date	11	10	1
Dispensing period	2	1	1
Pharmacist's skills			
Time per patient	-	-	-
Availability	3	2	1
Proximity	0	0	-
Confidentiality and assistance to patients	1	1	-
Information provided to patient and assessment of their state of health	3	3	-
Total	39	34	5

patient) and the pharmacist-patient relationship were the reason for 17% of the complaints made by patients to the PSD of the hospital. As a result, without the complementary information provided by the reasons for dissatisfaction, this aspect would not have been included in the aspects to be improved. One of the possible causes for dissatisfaction is the rise in the number of consultations in the absence of any increase in the number of pharmacists working in the OP, therefore resulting in the pharmacist spending less time with the patient (since 1997 there has been 1 specialist pharmacist and 1 resident pharmacist assigned to the OP with a 6-month rotation period). The number of patients attending the OP between 1998 and 2006 has had a mean annual increase of 23.1% (standard deviation, 6%). Figure 2 shows the evolution of consultations between 1998 and 2006, as well as the number of consultations required for pharmaceutical intervention. This figure shows that the number of consultations required for pharmaceutical intervention has increased four-fold, which may indicate a reduction in the quality of pharmaceutical care provided.

Those aspects scoring the least points in the patient satisfaction survey were mainly the dispensing area (waiting room and access to the OP) and the dispensing process (waiting time and consultation hours). These aspects were least valued in both groups, in particular by HIV patients, as is the case in other works published.^{11,12} The same aspects are the main reasons for dissatisfaction and account for 65% of the complaints received. Similar results were also obtained by Pichert et al¹⁴ and other authors,^{13,15} suggesting that delays in obtaining an appointment and waiting times which do not meet the expectations of healthcare service users have an influence both on the satisfaction and dissatisfaction of the patients using these services.

Other healthcare professionals (hospital management, Regional Ministry of Health or competent body, etc) must be made aware of the results concerning patient satisfaction or dissatisfaction

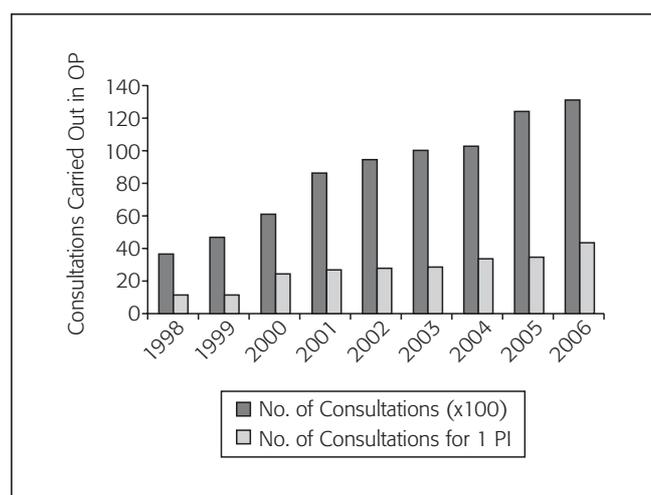


Figure 2. Evolution of the number of consultations carried out and number of consultations required for pharmaceutical intervention between 1998 and 2006. OP indicates outpatient pharmacy; PI, pharmaceutical intervention.

with the healthcare service received and that these are taken into account for any improvements planned. Indeed, a significant portion of the improvements required depends in part on these professionals, such as increased human resources (improvement in care processes) and improvements in structural resources within the OP (waiting room).

In conclusion, although the satisfaction index is high and it is useful for establishing what improvements are needed, it is also important to identify the reasons for dissatisfaction to complement this information. The aspects requiring improvements according to the results obtained are the need to increase structural and human resources so that the improvements demanded by the patients may be carried out.

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References

- Illana F. La organización centrada en la satisfacción del paciente. *Rev Calid Asist.* 2003;18(5):259-60.
- Mira JJ, Aranaz J. La satisfacción del paciente como una medida del resultado de la atención sanitaria. *Med Clin (Barc).* 2000;114:26-33.
- Hall J, Dornan M. Meta-analysis of satisfaction with medical care: description of research domains and analysis of overall satisfaction levels. *Soc Scie Med.* 1998;27:637-644.
- Pérez Peiró C, Borrás Almenar C. Evaluación de resultados humanísticos. In: Jiménez Torres NV, editor. *Calidad Farmacoterapéutica.* Valencia: Universidad de Valencia; 2006.
- García Vicente AM, Soriano Castrejón A, Martínez Delgado C, Pobrete García VM, Ruiz Solís S, Cortes Romera M, et al. La satisfacción del usuario como indicador de calidad en un servicio de medicina nuclear. *Rev Esp Med Nucl.* 2007;26:146-152.
- Ventura Cerdá JM, Sanfelix Gimeno E, Monte Boquet E, Fernandez Villalba EM, Alós Almiñana M. Satisfacción percibida por pacientes infectados por el VIH con la unidad de Atención Farmacéutica a pacientes externos (UFPE). *Farm Hosp.* 2005;29:134-139.
- Likert R. A Technique for measurement attitudes. *Archi Psychol.* 1932; 140:44-53.
- Criterios de calidad para la acreditación de los servicios de farmacia de hospital. Serie M: Manuals n.º 47. Valencia: Conselleria de Sanitat; 2005.
- Mira JJ, Aranaz J. La satisfacción como una medida del resultado de la atención sanitaria. *Med Clin (Barc).* 2000;114:26-33.
- Antón Torres R, Murcia López A, Borrás Blasco J, Navarro Gracia JF, Navarro Ruiz A, González Delgado M, et al. Evaluación de la calidad percibida por los usuarios de una unidad de atención farmacéutica a pacientes externos. *Farm Hosp.* 2006;30:99-104.
- Montero A, Feal B, Calvin M, Margusino L, Hurtado JL, Vázquez I, et al. Calidad percibida por los pacientes externos en la consulta de atención farmacéutica del servicio de farmacia. *Farm Hosp.* 2006;30:105-111.
- Monte Boquet E, Climent Boltá C, Condomina Candel J, Gilabert Estellés M, Poveda Andrés JL. Medida de la satisfacción de los pacientes VIH (+) con la atención recibida en una Unidad de Atención Farmacéutica a Pacientes Externos. *Farm Hosp.* 2004;28:5-6.
- Guix J. Dimensionando los hechos: la encuesta (I). *Rev Calid Asist.* 2004;19:402-6.

14. Pichert JW, Miller C, Hollo AH, Gauld-Jaeger J, Federspiel Ch, Hickson G. What health professionals can do to identify and resolve patient dissatisfaction. *J Qual Improv.* 1998;24:303-312.
15. Ferrando Piqueres R, Teruel Mateo C, Rocher Milla A, Carrasco San Felix C, Bellver Martinez M, Pérez Garcia MD, et al. Grado de satisfacción de los pacientes atendidos en la unidad de atención farmacéutica a pacientes externos. *Farm Hosp.* 2002;26:4-5.