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Patient satisfaction in a Spanish burn unit

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ABSTRACT

Background: As a result of the Spanish healthcare system overhaul, quality of care is becoming increasingly important. All burn service providers are required to measure patient satisfaction with care as an imperative need. Nevertheless, there are very few papers regarding patient satisfaction in burn units or in plastic surgery in general. The aim of this study is to examine patient satisfaction in our burn unit and to identify areas for improvement.

Materials and methods: Participants were all patients admitted to the Burn Unit at the Getafe University Hospital (Madrid, Spain) between January 2014 and December 2016. Patient satisfaction was assessed using the SERVQHOS questionnaire and Kano methodology. The SERVQHOS questionnaire was given to all patients at the time of discharge with completion thereof voluntary and anonymous. The Kano model consisted of an in-depth personal interview with patients and their relatives to identify patient requirements. Further, we developed a Kano questionnaire and analysed the results to prioritise the requirements for development activities.

Results: A total of 164 SERVQHOS questionnaires were collected, which means 58% of the discharged patients who were asked to participate returned the questionnaire. Mean overall satisfaction score was 3.7 (range 1–4). Ninety-seven per cent of patients would not hesitate to recommend the hospital to others, 90% believed they had stayed in the hospital for the time necessary and 89% did not have any pain relief problems. The issues that were rated the worst by users were those related to objective quality such as room conditions, location directions, ease of discharge from the hospital and employee appearance. The best-valued aspects were those related to subjective quality such as willingness to help patients, ability to inspire trust and confidence, courtesy and personal attention.

Conclusions: Patients hospitalised in our burn unit are highly satisfied with the care they receive, especially with regard to subjective quality. The evaluation of the satisfaction outcomes helped us to identify several strengths and weaknesses in the healthcare services we provide as well as strategies to improve the weaknesses. Evaluating care quality and patient satisfaction in any burn unit is appropriate and recommendable given that it offers clients' first-hand opinions.

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1. Introduction

Patient satisfaction has become increasingly important in recent years because it is a useful tool for assessing healthcare quality [1]. Some experts believe that patient satisfaction has major policy implications [2,3]. Regarding healthcare, research shows that the way how organisations respond to customer satisfaction issues can improve financial results including greater market share, better profitability, greater patient retention and referrals as well as a lower risk of malpractice lawsuits [4]. Owing to these financial implications, some authors state that unresponsive healthcare organisations will eventually withdraw because of their lack of attention to satisfaction issues [5,6]. For all the foregoing reasons, it is imperative for any burn service provider to measure patient satisfaction with care.

Previous studies also highlighted the importance of patient satisfaction with care, as this factor can influence treatment compliance [7,8] and it increases patient involvement in their own treatment [9]. Patients who are more satisfied with their care are more likely to be active and, therefore, have a better chance of improving their health condition [9]. This is also true for patients with burns.

Patient satisfaction with care has been described as a multidimensional concept. Parasuraman et al. developed the SERVQUAL (“service quality”) questionnaire for use by service and retail organisations [10]. Using SERVQUAL as a guide, the SERVQHOS (“service quality in hospital”) questionnaire was developed for use in the healthcare sector in Spanish-speaking countries [11]. We have chosen SERVQHOS as the measurement tool for assessing satisfaction in patients with burns in our study because it is a brief questionnaire, easy to complete and broadly used in Spain as a validated questionnaire.

Most published satisfaction studies analyse overall assistance in a hospital or in the emergency department with relief from pain or primary care. There are very few papers regarding patient satisfaction in plastic surgery. Through a systematic review published in 2010, Clapham et al. examined the state of patient satisfaction research within plastic surgery [12]. They found that breast reconstruction was the most common surgical issue included in the review, as it was presented in 71 of 178 articles (40%), followed by others such as cosmetic facial surgery (20%), breast reduction (10%), breast augmentation (8%) and craniofacial surgery (8%). Other surgical procedures including reconstructive surgery and burns were significantly less represented. In fact, we found very few publications related to burns [13–16]. Burn treatment regimens have changed drastically over the past 60 years, and a more aggressive approach in managing burn wounds has increased the survival rate and led to research focusing on long-term health condition and quality of life [17–21] rather than satisfaction with care. Those evaluations are relevant to the development of burn care, but the evaluation of the patient perspective with respect to the care procedures and routines is also important.

To date, this study is one of the extensive studies on care satisfaction following a burn. It aims to describe patient satisfaction with care in our burn unit and to identify areas for improvement.

2. Material and methods

This study was conducted in the Plastic Surgery Department and Burn Unit of the Getafe University Hospital in Madrid, Spain. Our burn unit is a national leader in Spain. A cross-sectional study was conducted assessing patient satisfaction using the SERVQHOS (“service quality in hospitals”) questionnaire and the Kano methodology.

2.1. The SERVQHOS questionnaire

All patients hospitalised in the burn unit from January 2014 to December 2016 were identified (348 patients). The questionnaire was given to all patients at the time of discharge except when a patient met the exclusion criteria, which were exitus, dementia or language problems, for obvious reasons. The questionnaire was voluntary and anonymous.

The SERVQHOS questionnaire is based on SERVQUAL (“service quality”) questionnaire. SERVQUAL is a work tool designed and broadly used to evaluate customer perception of service quality in service and retail organisations [10]. The authors of the scale affirm that there are five dimensions to service quality: reliability (the ability to carry out the promised service reliably and accurately), tangibles (equipment, physical facilities and staff appearance), assurance (employee courtesy and knowledge and their ability to inspire confidence and trust), responsiveness (the effort to help customers and provide fast service) and empathy (individualised attention the firm provides its clients).

SERVQUAL initially consisted of 22 pairs of items, which serve to measure consumer expectations and perceptions. The way service quality was measured was based on the difference scores by subtracting the expectation scores from the matching perception scores (“gap” score). Later, Parasuraman et al. revised the original SERVQUAL instrument [22–25] by eliminating customers’ expectations from the measuring process.

Although SERVQUAL was initially designed for application within financial services, the model is intended for a wide range of services and its potential usefulness in a hospital environment has been evaluated and proven [26–33].

SERVQHOS was created based on SERVQUAL for use in the healthcare field in Spanish-speaking countries. It is very similar to SERVQUAL, but patient expectations are not included in the measuring process. It is translated into Spanish and reflects minor modifications so that it could be adapted to the healthcare field [11]. This is a generic, non-surgery-specific questionnaire.

The SERVQHOS questionnaire is divided into three sections. The first one comprises 19 items measuring perceptions of several factors that influence assistance, rated on a 5-point Likert scale. Patients had to answer the question “How did you find the quality of assistance on the following aspects . . . ?” with a rating from 1 to 5, where 1=“much worse than I expected”, 2=“worse than I expected”, 3=“as I expected”, 4=“better than I expected” and 5=“much better than I expected”. The 19 aspects include the five dimensions of service quality: reliability, tangibles, assurance, responsiveness and empathy. The items can also be divided into aspects related to subjective quality (human assistance) and those

related to objective quality (organisational and facility issues). The second section includes a variety of questions on overall satisfaction (rated on a 4-point Likert scale where 1: very dissatisfied, 2: dissatisfied, 3: satisfied and 4: very satisfied) such as whether they found the length of stay to be appropriate, whether they would recommend the hospital to others, whether the hospitalisation was scheduled or urgent, the number of hospital admissions in the last year, whether the information received was sufficient and whether they knew the name of the doctors and nurses. The third section includes socio-demographic data: sex, age, educational level and employment status. Finally, a free space is provided for feedback.

2.2. The Kano model

We used the Kano method to identify patient requirements. This method was developed in the 1980s and is based on the work of Professor Noriaki Kano from Tokyo Rika University [34]. The Kano model is a theory for product development and customer satisfaction, which classifies customer preferences into five categories: Must-be Quality, Attractive Quality, One-dimensional Quality, Indifferent Quality and Reverse Quality. Must-be requirements are those that customers expect to be mandatory and are taken for granted. Attractive attributes are those that result in satisfaction when fully achieved, but do not cause dissatisfaction when they are not. The indifferent attributes are those that produce neither satisfaction nor dissatisfaction. One-dimensional attributes provide satisfaction when they are met and dissatisfaction when they are not met. These are the attributes that create competition among companies. Reverse attributes refer to a high degree of achievement that results in dissatisfaction and to the fact that not all clients are equal.

The Kano model gives an idea of the product attributes that are perceived as important to customers.

The first step in the Kano method is to explore the “customer’s voice”. This term refers to the in-depth process of capturing customer’s expectations, preferences and aversions through personal interviews. The wants and needs are then organised into a hierarchical structure and then prioritised in terms of relative importance.

We gathered the information from individual structured in-depth interviews with patients and their relatives focusing on their experiences with the care procedures and routines in our burn unit. Participants were selected from among the patients admitted to our unit throughout 2015. The exclusion criteria were exitus, dementia and severe language difficulties, for obvious reasons. We used a “theoretical” sampling for patient selection; in other words, a specific type of non-probabilistic sampling commonly used in qualitative research where the objective of the study guides the sampling [35]. This approach to sampling allows the researcher to deliberately include a wide range of types of informants. An indeterminate number of interviews must be carried out until a redundant client discourse is obtained. We needed to interview 12 patients and their relatives. Two researchers transcribed the conversations with needs statements or requirements, and these were then extracted and organised into a more usable hierarchy following the Ofuji model [36]. Finally, the Kano questionnaire was designed. Each question had two parts: the functional

form and the dysfunctional form. Patients could answer them in one of five different ways (e.g. Table 1).

The questionnaire was sent by postal mail to all patients who participated in the face-to-face interview and to an equal number of patients randomly selected from the same population (24 patients).

Once all the Kano questionnaires were collected, we tabulated them in the Kano evaluation table and the requirements were classified as must-be, one-dimensional or attractive, and they were prioritised for development activities.

2.3. Statistical analysis

We did not use a statistical analysis because this is a descriptive study. We used descriptive statistics rather than inferential statistics to quantitatively describe or summarise features of our data collection. Data are reported as percentages for qualitative variables and as means for quantitative variables.

3. Results

3.1. The SERVQHOS questionnaire

Over the three-year study period, 348 patients were hospitalised in our burn unit. The questionnaire was given to 285 patients and a completed survey was returned by 164 patients (58%).

The responders’ demographic characteristics are summarised in Table 2.

The results of the first section of the SERVQHOS questionnaire are shown in Table 3 and Fig. 1, presented as a mean of the Likert scale rate. It is worth noting that the scores given to each of the items were, in general, very high.

The aspects that users rated the worst were those related to objective quality (tangibles dimension) such as room conditions, location directions, ease of getting to the hospital and employee appearance. Among the best-valued aspects were the ones related to subjective quality (responsiveness, assurance and empathy dimensions) such as willingness to help patients, the ability to inspire trust and confidence, courtesy, the nurses’ interest in patients and personal attention.

Items for which less than 85% of the patients gave 4 or 5 points on the Likert scale were identified as weaknesses or areas for improvement.

Table 1 – Example of a pair of patient requirement questions in the Kano questionnaire.

Question	Answer
Functional form of the question: How would you feel if you had an individual room?	<ol style="list-style-type: none"> 1. I like it that way 2. It must be that way 3. I am neutral 4. I can live with it that way 5. I dislike it that way
Dysfunctional form of the question: How would you feel if you had a shared room?	<ol style="list-style-type: none"> 1. I like it that way 2. It must be that way 3. I am neutral 4. I can live with it that way 5. I dislike it that way

Table 2 – Demographic characteristics of responders.

Demographic variables	
Age at injury (mean)	48
Gender (%)	
• Male	62
• Female	38
Education (%)	
• None	9
• Compulsory school	54
• High school	27
• University	10
Employment (%)	
• Employed	42
• Retired	29
• Unemployed	22
• Student	0
• Housewife	7
Hospital Admission (%)	
• Emergency	66
• Scheduled	34

Table 3 – Patient satisfaction: the first section of questions of the SERVQHOS questionnaire rated on a 5-point Likert scale from 1 (much worse than I expected) to 5 (much better than I expected).

Items in each dimension (Mean)	
Objective quality	
Tangibles:	
• Modern equipment technology	4.4
• Hospital employee appearance	4.3
• Location directions	4.1
• Room conditions/facilities visually appealing	4.0
• Ease of getting to the hospital	4.1
Reliability:	
• Ability to perform the promised service accurately	4.5
• Waiting time for service	4.2
• Timeliness at the doctor’s office	4.3
Subjective quality	
Responsiveness:	
• Sincere interest in solving problems	4.4
• Provision of prompt services	4.3
• Willingness to help patients	4.5
Assurance:	
• Ability to inspire trust and confidence	4.6
• Employee courtesy	4.6
• Employees’ professional skills	4.5
• Nursing staff interest in patients	4.6
Empathy:	
• Individual/personal attention	4.5
• Understanding of specific patient needs	4.4
Objective quality	
Others:	
• Information about treatment	4.3
• Information to relatives/families	4.3

The results of the second section of the questionnaire are displayed in Table 4. Mean overall satisfaction score was 3.7 of 4. Ninety-seven per cent of patients would not hesitate to recommend the hospital to others, 90% believed that they had stayed in the hospital the time necessary and 89% did not have any problem with relief from pain. However, 38% of the patients did not know the name of the doctor who treated them during hospitalisation and 30% did not know the name of the nurse.

The free space for feedback was used by 58 patients who gave one or more comments or suggestions: 41 acknowledgements/words of gratitude, 13 complaints about the facilities and the catering service, 4 complaints regarding the care received by staff and 2 complaints about the lack of personnel (Table 5).

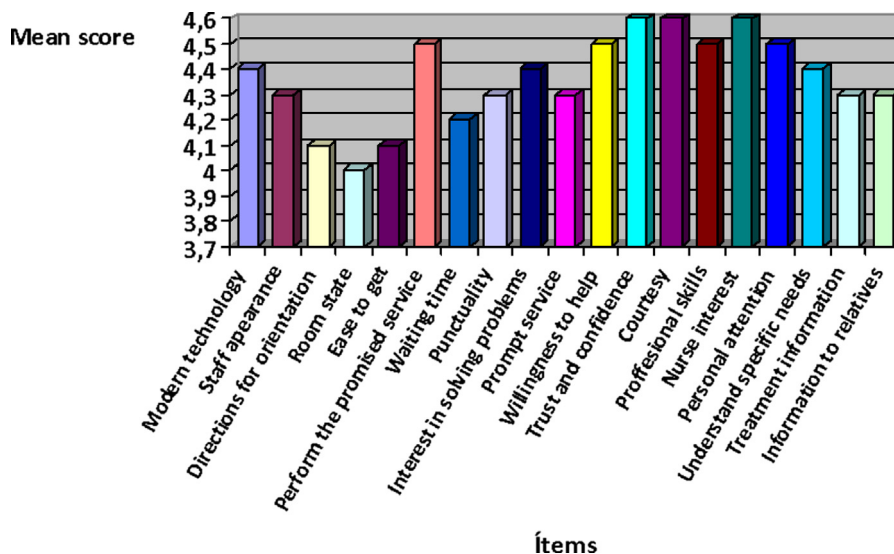


Fig. 1 – Results of the first section of the SERVQHOS questionnaire.

Table 4 – Patient satisfaction (the second section of the SERVQHOS questionnaire).

Global satisfaction with treatment (Mean)	3.7
Would you recommend this hospital? (%)	
• Yes, no doubt	97
• I'm not sure	2
• Never	1
Did you undergo medical tests without your permission? (%)	
• Yes	2
• No	98
Do you believe your length of stay was . . . ? (%)	
• Shorter than necessary	10
• Adequate	90
• Longer than necessary	0
Did you have any problems with relief from pain? (%)	
• Yes	11
• No	89
Do you know your doctor's name? (%)	
• Yes	62
• No	38
Do you know your nurse's name? (%)	
• Sí	70
• No	30
Did you get enough information? (%)	
• Yes	96
• No	4
Overall satisfaction is rated on a 4-point Likert scale (1: very dissatisfied, 2: dissatisfied, 3: satisfied and 4: very satisfied).	

3.2. The Kano model

To identify patient requirements, 12 patients of age 22 to 63 years were interviewed face-to-face (8 women and 4 men).

We obtained 18 requirements following the personal interviews. We grouped them using the affinity diagram into

Table 5 – Comments in the free space for the feedback section.

Comments or suggestions
<ul style="list-style-type: none"> • 41 Acknowledgements • 13 Complaints about the facilities and catering services <ul style="list-style-type: none"> ○ Small room, noisy ○ The laundry and catering services need to improve ○ A family toilet should be available ○ Too hot in the room ○ TV is too expensive ○ Complaint because of a change of room during stay ○ Need for individual room ○ TV should be free ○ Need for more water with meals ○ Lifts are too small ○ Need to improve the air conditioning and chairs for relatives ○ TV is too expensive and it should be free ○ Need for better facilities for relatives • 4 Complaints about staff attention • 2 Complaints about the lack of staff

11 requirements, which we used for the Kano questionnaire. The response rate was 83%. Once we created the Kano Evaluation Table, we obtained the results shown in Table 6.

3.3. Areas for improvement

In view of the results of the SERVQHOS and Kano questionnaires, we identified and analysed the following areas for improvement with the corresponding improvement strategies implemented:

1. The facilities and catering services (individual room, free TV and automatic television turns off at midnight): we raised the complaint with the hospital management because they are areas for improvement over which our department has no control. Thus far, most patients are being admitted to individual rooms whenever possible.
2. Information about the exact time for dressing change: we agreed with the nursing team to make a timetable for dressing changes at the beginning of the day to be able to inform each patient.
3. The appearance of hospital employees: a meeting was held to spread awareness among all staff of the need to take care of their appearance.
4. Knowledge of the doctor and nurse names: Medicine is becoming increasingly dehumanised as machines and apparatuses take over the tasks of diagnosis and therapy. However, in a sort of backlash, the very complexity of modern scientific medicine is focusing attention on personal involvement and the “humanisation of medicine”. In this sense, the knowledge of the name of the doctor and the nurse helps humanise medicine. In our department, all personnel were required to carry their ID-badge and were encouraged to introduce themselves to patients.

The use of the same questionnaire will allow us to assess the impact of actions taken in the future (Table 7).

Table 6 – Patient requirement classification by the Kano method.

Must-be	Free television Television automatically turns off at midnight
Attractive	Individual room Information about the exact time for the dressing change More staff for emergencies
Indifferent	Psychological treatment for relatives Cleaner rooms Waiting time at the office shorter than 30min Provision of telephone consultations
Questionable	Waiting time shorter than 20min for ambulance transport Improved personal attention at the outpatient clinic

Table 7 – Patient requirements classification in Kano method.

Must-be	Free television Television automatic turn off at midnight
Attractive	Individual room Information about the exact time for the dressing change More additional staff for emergencies
Indifferent	Psychological treatment for relatives Cleaner rooms Waiting time at the office shorter than 30min Provision of telephone consultations
Questionable	Waiting time shorter than 20min for ambulance transportation Improvement of personal attention in the outpatient clinic

4. Discussion

As a result of the healthcare system overhaul, quality of care has become increasingly important and many experts emphasise that results of patient satisfaction will need to be reported by insurance companies and care providers [37–39].

This study analyses the satisfaction with care of former patients in our burn unit. Patients with burns show high satisfaction rates with mean overall satisfaction score was 3.7 of 4. The issues best valued by users are the subjective ones. The study enabled us to identify and analyse some areas for improvement, and the corresponding improvement strategies were implemented.

We achieved a participation rate of 58% in our study, which is quite similar to that in other publications on burn units [13–15]. Studies in other populations present higher participation rates; for example, Arrebola-Pajares et al. published a participation rate of 92% using the same SERVQHOS questionnaire in patients with urological problems in our country [44]. This difference may be due to the specific population of burns whose attrition, because of repeated episodes of severe acute pain (frequent dressing changes, surgical procedures and intense rehabilitation) and a long length of stay, may condition a lower response rate.

In the present study, the 164 patients hospitalized at our burn unit who responded to the questionnaire had very high overall satisfaction, with a score of 3.7 of 4. This means that 98.8% of patients were satisfied or very satisfied with the care given in our unit. This outcome is slightly higher than that observed in other studies [13,15]. In a study published in 2008, Wikehult et al. examined patient satisfaction with burn care 1–6 years after injury, and they found that mean scores of the PS-RESKVA questionnaire were between 1.8 and 3.3 (range 0–4) [13]. In 2012, Andrews et al. published means across various dimensions of patient satisfaction with burn care at 3 months after injury and the mean was between 3.93 and 4.41 (range 1–5) [15].

In our unit, the issues rated the worst by users were aspects concerning objective quality (room conditions, location directions, ease of getting to the hospital and employee appearance) and the best-rated issues were aspects relating to subjective quality (willingness to help patients, the ability to inspire trust and confidence, courtesy and personal attention). This situation has also been highlighted in other satisfaction surveys using the SERVQHOS questionnaire [40].

With regard to the measurement tool, we used the SERVQHOS questionnaire [11]. It is not an ad hoc questionnaire created by the authors without following a formal development process, the results of which would not have been reliable, valid or responsive. It is a generic, non-surgery-specific questionnaire that has been validated and tested for psychometric properties, the use of which may be more expedient. However, we realised that it does not target specific conditions reflected in our population and the use of a validated procedure-specific questionnaire would have been better.

SERVQHOS provides information on patient satisfaction with providers and medical services but not surgical outcomes (aesthetic, functional or psychological outcomes). However, we believe that the results of the study give us an idea of satisfaction with medical procedures and outcomes as we imagine that both are closely linked; a patient who is dissatisfied with the outcomes of their plastic surgery is not very likely to rate care very positively.

Our study involved qualitative research. Qualitative research is often criticised in the field of healthcare for a lack of scientific rigour. It is a field with a strong tradition in quantitative and experimental methods. In any case, various strategies are available to protect qualitative research against bias. One of the criticisms could be that we have used a non-probabilistic sample. However, this approach to sampling, which is often misunderstood in medical circles, allows the researcher to deliberately include a wide range of informant types and also select key informants with access to important sources of knowledge [35] her criticism could be the collection of raw data in a relatively unstructured manner such as transcripts of conversations. We have tried to enhance the reliability of the data by organising an independent assessment of transcripts by additional skilled qualitative researchers to compare agreement between the raters [35].

5. Conclusion

Patients hospitalised in our burn unit show high satisfaction with care, especially with regard to subjective quality. By evaluating the satisfaction outcomes, we were able to identify several strengths and weaknesses in our healthcare provision as well as strategies to improve the weaknesses. Evaluating care quality and patient satisfaction in any burn unit is appropriate and recommendable given that it offers clients' first-hand opinions.

Conflicts of interest

None.

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