same, or worse? Would you recommend it to a family member or friend? If you could choose between a public or another private hospital and the one in the study, which one would you choose?), we found no statistically significant differences between any of the independent variables, although it should be pointed out that of those who responded to our telephone questionnaire 36.4% considered this hospital better than the rest, 35% the same, and 4.2% worse than other hospitals. Likewise, 88.8% of those questioned would recommend it to their family or friends, and only 3.5% would not do so. Regarding choice of hospital for possible future surgery, 67.8% would choose the study hospital again.

DISCUSSION

The percentage of responses obtained was 70.1%, which we consider acceptable when compared to other studies (7,8) in which we found rates of 60% and 77.1%, respectively, using the same method of interview. The percentage of participation in satisfaction studies (9) using opinion polls tends to be low, 30-40%.

In individually evaluating the items relating to socio-demographic variables, we agree with Mira (1) in showing that older, less educated individuals were more satisfied with health services than young people with a higher academic level.

With regard to surgical speciality, statistically significant differences were observed in the answers given to the items "ease of telephone contact", "waiting from time of appointment" and "information from clinicians". These were scored best by clients of ophthalmology and worst by those of otorhinolaryngology, and were related to difference in age (1) between samples, which in turn were associated with differences in academic level, and also with the fact that cataract surgery is rewarding for the patient.

"Waisting list" (factor 4 in the factorial analysis) was the worst scored item, in agreement with other studies (5,10), this being the only one in which cumulative percentages give values equal to or lower than 7 in more than half of cases (51.4%). This could be influenced by the inability of our clients to distinguish between time on the surgical list of the administration for resolution of their pathological process, and time on the waiting list of the day surgery unit of the hospital. This results in the scores given by our clients covering the whole of the 0-10 scale used, with the highest peaks at both ends. This is highly related to the degree of user satisfaction (11).

Upon carrying out the factorial analysis, a grouping of variables into four factors was obtained. As in the study of Gea (5), the variables in the dimensions "scientific and technical guarantee" and "personal treatment" are highly related, forming almost a single dimension in our study. This could be related to difficulties in questionnaire understanding, as a large number of patients were probably unable to distinguish between technical ability and friendliness in professionals. We think this is related to the difficulty of evaluating a numerical scale by a population whose educational level, in more than half of those questioned, is lower than primary. This mixture of variables may also be due to the high index of resolution of the pathological conditions involved, and the characteristics of the day surgery unit itself.

The item confidence in service and safety in the theoretical model covers the scientific and technical guarantee. In the study of Gea (5) it was covered as personal treatment. In our model they are mixed in a way similar to that used in the study of Ruiz (8), relating them to items which in the original model referred to the dimensions of convenience and access. We think that this could be influenced by the short time spent in the center.

Our data on confidence are similar to other studies’ (8,12), with only 5.6% of those responding to the item considering the hospital to be worse than others, while 96.2% would recommend it to their family and friends, 84.3% would choose it again, and only 6.3% of those who answered would choose a private hospital.

In other studies (12,13) carried out in day surgery units using a qualitative scale, high levels of satisfaction – 79 and 89%, respectively – were obtained. In our model, levels of satisfaction were higher (9.1, scale 0–10, and all items with a mean score above 6), which may be related to its present mode of conduct ('unit of clinical conduct'), to the large amount of written information that clients receive (14), to explanations by professionals (15) of what is and will be carried out, to the treatment administered by surgeons, (16), to postoperative and health centre follow-up being carried out by the same professional who performed the surgery, to the telephone call that they receive the following day, to the technical knowledge and friendliness of the staff in the day surgery unit, and to the characteristics of this type of surgery (17), which allows them to return home on the same day of the operation.

CONCLUSIONS

The satisfaction of patients treated by programmes in our day surgery unit is high: 9.1 (scale 0-10). Of those questioned, 88.8% would recommend the unit to their family and friends, and if allowed to choose, 84.3% would select the unit again. The best rated aspects were: treatment with respect by the hospital, respect of users privacy, and information received from professionals. The worst rated aspect was length of time on the waiting list.

REFERENCES

respectful treatment in the hospital, respect of privacy, resolution of medical problem, and satisfaction with the time devoted by clinicians. The analysis of confidence showed a Cronbach Alpha coefficient of 0.9060 for this factor.

Factor 2. Convenience and confidence in hospital treatment. This includes the items: waiting from time of appointment, convenience of building, convenience of treatment rooms, hospital signposting, hospital cleanliness, confidence in hospital treatment, and perceived safety. Cronbach alpha coefficient 0.8708.

Factor 3. Accessibility I (of hospital and staff). Includes: paperwork and bureaucracy; ease of telephone contact, and being listened to, when required. Cronbach alpha coefficient 0.6652.

Factor 4. Accessibility II (of surgical service) to the day surgery unit, coinciding with the item 'waiting list', which appears in our factorial as an independent factor. On analysing variables obtained from the factorial analysis with respect to sociodemographic variables we found statistically significant differences in:

Factor 1. "Scientific and technical guarantee of the service and personal treatment", there being a greater perceived level of satisfaction by users of lower academic level (primary or lower).

Factor 4. "Waiting list"; the least content were those in the lowest age group (<30 years).

The study of the total satisfaction dimension as covered by the item "are you satisfied with the service you received in hospital?" showed that users in active employment and pensioners over 65 years of age were the least satisfied.

With the item "do you know the name of the clinician who treated you?", 62.2% answered yes against 37.8% who did not know the clinician's name, there being significant differences between the variables "education level" and "marital status", with more positive answers from those with the highest academic level and those who were married.

With regard to items referring to confidence in hospital (1. Is this hospital, compared to others, better, the
There were differences in the reasons for ‘no response’ when compared with sociodemographic variables, but none were statistically significant.

When analysing the sociodemographic variables obtained during the interviews, we found that of the users who responded 37.8% had failed to finish their primary studies, 15.4% had never been to school and of these 4.2% were unable to read or write, thus giving a total of 53.1% of the sample with an educational level below primary. With regard to employment, the majority of those questioned were in non-productive categories, notably 35% housewives and 28.7% retired people over 65 years old. With regard to marital status, 67.8% were married and 14% single.

The scores given to the different items on a scale of 0 to 10 by those questioned, with cut-off points at values 5 and 7. It is recognised that the worst scoring item, with the largest standard variation, was waiting list (mean and standard deviation: 6.18; 3.51), for which 37.9% of responding users gave values between 0 and 5, and 51.4% between 0 and 7. Best scoring items included degree of respect, respect of privacy, and medical information.

The statistical analysis of individual values by item with respect to category and sociodemographic variables showed statistical significance in:

- Gender. Item 3 (paperwork and bureaucracy) was scored better by women.
- Age. Items no. 5 (waiting from time of appointment) and 10 (hospital signposting) were better scored by elderly people.
- Educational level. Items no. 14 (information from doctors) and 19 (respect of privacy) were better scored by people of lowest academic level.
- Employment. Items no. 1 (overall satisfaction), 2 (ease of telephone contact), 5 (waiting from time of appointment), 10 (hospital signposting), 14 (information from doctors), and 22 (perceived safety) received lower scores from those in employment.
- Within the categories of marital status and location, there were no significant differences in any of the items.
- With regard to surgical speciality, there were statistically significant differences in the responses to items no. 2 (ease of telephone contact), 5 (waiting from time of appointment) and 14 (information from doctors), best scores coming from the clients of the ophthalmology department, and worst from those of otorhinolaryngology.

The factorial analysis, to which we submitted the 18 purely numerical items for data reduction, has been split up into four factors or dimensions, with a total variance value of 71.642%. The four factors or dimensions into which they are grouped are:

Factor 1. Scientific and technical guarantee of service and personal treatment. This includes: information from clinicians, information from nurses, confidence in clinicians,
This type of surgery is now well accepted within the national health service, due to its philosophy and common principles (2): to aim at reducing to a minimum hospital stay for patients requiring surgery (3) or diagnosis, and to increase the success and efficiency of health services with the least possible harm that an early return to daily life may cause to either patients or their relatives. Thus, this represents a form of treatment favouring the interests of users, health care professionals, and health service administrators (4).

In health services, as in any company, it is important to continually improve quality, and to achieve this it is necessary that views of clients be known. A number of variables (5) are related to user satisfaction (age, academic level, gender, health status...).

The aim of this study is to ascertain the level of satisfaction of users of a day surgery unit in a third level hospital.

MATERIAL AND METHODS

This is a descriptive study carried out in July-August 2001. The study population consisted of 639 users over 14 years of age, who used our day surgery unit for the resolution of pathological conditions after having been informed of and accepted into the programme during April and May.

The population size necessary for the hoped-for rate of satisfaction of 70%, assuming an error of 7% and with a confidence interval of 95%, was calculated through EpiInfo to be 131 patients, who were randomly selected.

The analytical instrument used is an adaptation of the SERCAL questionnaire (6) for short-stay hospital services, based on the SERVQUAL of Zeithami, which measures users’ opinions on the perceived quality of a health service in four dimensions: accessibility, convenience, personalised service, and scientific and technical guarantees, to which the dimension of confidence in the service may be added. This instrument has been adapted and validated for the analysis of short-stay hospital units in the Andalusian Community. The questionnaire used in the study consists of 27 items structured into 5 large blocks, 4 of which are evaluated with items measured on a Likert scale adapted to a 0-10 point score (0 the most negative, and 10 the most positive), on the one hand to describe hospital accessibility and convenience, and on the other hand to evaluate professionals, both their interpersonal relationship ability and their scientific and technical quality. The fifth block refers to confidence in both the hospital and service, which is evaluated through categorised questions.

We classified the variables employed as:

Independent variables. Socio-demographic data obtained from the hospital database and from interviews with our users. Sex, age (<30, 30-60, >60), place of residence, education level, employment, marital status, and surgical speciality.

Dependent variables. The dimensions of perception of quality obtained from the different items in the SERCAL model quality questionnaire: overall satisfaction, accessibility, convenience, personalised service, guarantee, and confidence in the service.

Questionnaire data were obtained from the hospital database and telephone interviews.

The statistical analysis was performed using the statistical programme SPSS 10.0. Significance was assumed for values of p < 0.05.

Within the population studied, a descriptive analysis of non-responders was carried out. For those who responded, the frequencies and percentages of sociodemographic variables were determined: age, sex, education, employment, marital status, and locality.

For dependent variables, absolute and relative frequencies of dichotomic and categoric variables were determined, whereas in numeric variables the mean and standard deviation were estimated to show the dispersion of opinion among responses. In turn, cumulative percentages were calculated, taking the values of 5 and 7 as cut-off points. A thorough bi-variate analysis was carried out to show possible differences using the χ² test (qualitative variables), and the "Student t-test" and "Anova" (quantitative variables).

Answers obtained for numeric variables underwent a factorial analysis through data reduction, in which related variables (through agreement of answers received) were grouped into different factors, which were analysed versus sociodemographic variables.

RESULTS

Of the 751 users seen in the day surgery unit during April and May 2001, 639 over 14 years of age were included in the study, from which 204 patients were selected by simple random sampling. Of these, 143 (70.1%) responded to the telephone-administered questionnaire, a number greater than that calculated.

The distribution of the sample with regard to the variables of age, gender, place of residence, and surgical speciality within the day surgery unit is shown in Table I. There were no significant differences between those who responded to the questionnaire and those who did not.

The age variable shows a normal distribution with a mean of 59.11 years, and a standard deviation of 18.29 (59.11; 18.29) with a median of 64 years. For ophthalmological specialities (68.49; 11.09) the median value was 70 years; for general and digestive surgery (52.33; 18.02) 56 years; and for otorhinolaryngology (30.87; 14.51) the median value was 26 years.

The main reason for “no response” among users of the day surgery unit was their not answering the telephone (60.7%), followed by ‘others’, a category which includes communication problems such as aphasia and deafness; only 8 users (3.9% of the sample) did not wish to respond once they had actually been contacted (Fig. 1).
Levels of satisfaction and perceived quality in a day surgery unit of a tertiary referral hospital

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ABSTRACT

Introduction: surgical and anesthetic advances have allowed an adequate develop at the day surgery programs, with a rational application and cost-effectiveness of the hospital resorts.

The aim of this study, is to know the level of quality perceived in surgical treatment in a program of day surgery.

Material and methods: a randomised selection of 204 patients from a serie of 751 operated, between April-May 2001 in a day-surgery institution, was done. Phone questionary was done following protocol SERCAL (sociodemografic factors and general satisfaction, accessibility, personal assistance, guarantee and fidelity service) with validation for day surgery programs.

Absolut and relatives frecuencies were evaluated for dicotomic and categoric variables and medium and standard desviation for numeric variables.

Possibles differences were evaluated by χ² test in qualitatives variables and t Student and Anova test for cuantitatives variables.

Results: response index was 70.1%. Satisfaction general index was 9.1%, for 18 numeric items (range 0-10).Social and demographic items show that the best validity of treatment were by elderly, women, retired and low cultural patients.

Data reduction by factorial analysis showed 4 factors with incidence (total variance 71.62%):

—Scientific-technical guaranty service and adecuate personal treatment (alfa-Cronbach 0.9060).
—Confortable and security assistance (alfa-Cronbach 0.8708).
—Accesibility to hospital and professionals (alfa-Cronbach 0.0652).
—Accesibility to surgical service.

Conclusions: general satisfaction of the patients treated in the day-surgery program was high, 9.1 (range 0-10). 88.8% patients would recomended this type of treatment to their parents or friends and in 84.3% would repeat the same experience in the surgery unit.

The best appreciate items were the direct treatment and relation, respect, intimidity and information along the assistencial circuit by implicated profesionals.

The worst identified item was the time past in waiting surgical list.

Key words: Surgical quality assistance. Day surgery perceived satisfaction. Day surgery.

INTRODUCTION

Changes occurred in the Spanish and European society in the past decades, with improved socio-economic conditions, a better educated population, and better access to public services, has caused, among other things, an ageing of the population and an expectation of improved quality in the national health service. The degree of satisfaction of clients using health services is closely related to the expectations created by the service they are due to receive (1). On the other hand, medical progress has resulted in the development of techniques that are ever more complex and precise, though very costly from an economic point of view. All this, together with the complexity of services and the policies of optimising and limiting resources associated with the search for overall quality in the national health services, has favoured the development of new strategies, among which the creation of day surgery units has been noteworthy.

Day surgery units arose as an alternative to in-patient surgery, with the aim of finding ways to maintain the quality of hospital treatment while reducing costs associated with each operation.