Perceived quality and patient satisfaction from a day surgery clinic in Greece

George Simatos, Evangelos Filoppoulos, Feneli Karachaliou, Vasilios Zompolas, Intas George, Ekaterini Tsiropoulou, Aristofania Simatou, Vasilios Raftopoulos, Agelos Papadopoulos

ABSTRACT

Objectives: To explore perceived quality and patient satisfaction from a Day Surgery clinical setting of a major Oncological Public Hospital in the Greece.

Methods: It is a prospective study including all patients admitted for breast diseases from January to May of 2015 in the Day Surgery unit of a major Oncology Public hospital in Athens, Greece who were willing to answer specially designed questionnaires on perceived quality of primary care and satisfaction with provided care. The sample consisted of 105 patients with breast disease, aged 46.2 ± 13.1 years. The questionnaires used were Global Scales, the Expectations-Perceived Quality-Satisfaction with Primary Care Services Scale (E-PQ-SCSS), the Hospital Anxiety and Depression Scale (HADS) and the 12-Item Short Form Survey (SF-12). All questionnaires are validated in the Greek population. Analysis was performed with the statistical package SPSS v.21.

Results: Most of the cases were benign (74.7%). Overall, 25.7% of the patients underwent the minimally invasive procedure of stereotactic biopsy: 19% Mammotome and 6.7% Breast Lesion Excision System (BLES). Patients were very satisfied from the physicians (82%) and nurses (86.7%) and rated as excellent the quality of services in Day Care Units (DCU) (8.7). Patients with minimally invasive procedures reported significantly greater satisfaction for the time dedicated by the nurses compared to the time dedicated by physicians (4.9 ± 0.2 *versus* 4.5 ± 0.7). Patients who underwent surgery reported significantly less activity compared to patients with minimally invasive procedures (1.6 ± 0.4 *versus* 1.9 ± 0.3). Waiting time for admission had as strong negative correlation with satisfaction from the administrators (r=0.775) and therapeutic intervention (r=0.653). For patients with malignancy scheduled admission punctuality was significantly very important compared to patients with benign diseases (4.9 ± 0.3 *versus* 4.3 ± 0.7).

Conclusion: The quality of services in the Day Surgery setting is very high resulting in its approval by the patients.

Key Words: *Oncology public hospital; Patient satisfaction; Day surgery; Perceived quality of healthcare services; Greece*

INTRODUCTION

An important contributor in the assessment of an efficient national health system is the quality of the provided services and the level of patient satisfaction. It seems that the quality in health care services is a procedure of rejection *versus* confirmation of patient expectations to their perceptions [1,2]. Therefore, quality is best assessed by the way it is perceived by the patients and expressed in patient satisfaction accordingly.

The incorporation of DCU and more particularly Day Surgery ones in the Greek national health system has been slow and limited. The recent financial and social difficulties have made more than ever mandatory the assessment of the efficiency, quality and degree of patient acceptance of Day Care services. This will allow their appropriate development both in number and variety of the provided services. Their impact in the financial viability of the system is considerable. It has been estimated that the annual financial benefit of the existing day units in Greece rates in the level of 225 million euros [3].

Many factors affect patient satisfaction. They include the structure and environment of the health provider, patient expectations, personnel characteristics and waiting time [4]. In the subset of DCU in addition to the above satisfaction depends on patient characteristics, selection criteria, level of pain control, safety of the procedure, information and education regarding self-care and interrelationship between day care unit and community services [5-8].

In our country there are only four dedicated Oncology hospitals which deal with the majority of oncology cases, from all over Greece, the rest of them being dealt in general hospitals. Therefore, the patients admitted in each of the four major Oncology hospital consist a large and nationally representative sample of oncology patients.

The aim of this study was to assess the factors associated with the perceived quality and patient satisfaction from the services of the Day Surgery unit of a major Oncology Public hospital in Greece.

METHODS

It is a prospective study that took place from January to May of 2015 in the Day Surgery unit of a major Oncology Public hospital in Greece, in Athens. Target population consisted of all patients admitted in the Day Surgery unit for breast diseases. Exclusion criteria were patients unwilling to participate or unable to communicate in Greek. Patients who agreed to participate gave an informed consent. The Scientific Committee of the hospital approved the study acting as an ethics committee. A total of 134 patients were approached out of whom 105 (78.3%) agreed to participate in the study.

An anonymous and especially designed questionnaire was used to explore women's perceived quality of primary care and satisfaction with provided care. The questionnaire was administered in the Greek language. The first part of the questionnaire included questions to elicit information on demographic, employment, socio-economic characteristics of the participants, health status, and global scales measuring quality and satisfaction with care provided. The second part of the questionnaire included the E-PQ-SPCSS, the HADS and the SF-12. All questionnaires are validated in the Greek population. The E-PQ-SPCSS questionnaire has been used and validated even in the setting of a Greek Day Care Oncology Unit [9]. Cronbach's-alpha of the questionnaire was found to be 0.95 that is considered excellent. Cronbach's-alpha for the HADS and SF-12 have been reported 0.88 and 0.9 in Greek hospital general samples respectively [10,11]. It means that the questions are appropriate with very good correlation and consistency.

We have used a 23-question version consisting of two answers for each one. The first answer referred to how important is for the patient the quality parameter in question (this was considered as perceived quality) and the second how satisfied the felt been during in-hospital stay. The answers rated from 0=not at all to 5=very much. Table 1 shows the respective percentages of patients who rated their answers with 5 (very much).

In HADS questionnaire used to estimate the patient's anxiety and depression level, answers rated from 0=not at all to 10=very much

TABLE 1

E-PQ-SPCSS results (%)

	How important is for you? Very much (5)	How satisfied are you? Very important (5)
The nurse spends time to answer to my questions	68%	71,1%
To feel that the nurse is interested in my problem	54.8%	57.8%
The nurse is friendly with me	66.7%	72.2%
The nurse is discreet	51.6%	71.4%
To feel that the nurse knows well his job	80.4%	78%
The nurse gives me advice for the wellness of my health	57.9%	61.1%
The doctor is willing to answer my questions	79.2%	69.3%
The doctor spends time to explain therapy and advise	79.8%	67.4%
To feel that the doctor is interested in my problem	76.8%	68.9%
The doctor is friendly with me	65.6%	64.8%
The doctor is discreet	61.4%	74.4%
To feel that the doctor knows well his job	89.7%	83.1%
The doctor respects me as human being during examination	86.5%	83%
The doctor protects my dignity when he examines me	85.3%	85.2%
The doctor gives me advice for the wellness of my health	75%	64.4%
The doctor spends enough time for my medical history	61.3%	58.6%
The Doctor is accurate with my scheduled admission	70.5%	66.7%
The doctor orders all the necessary tests	78.1%	75.9%
The doctor is not in a hurry during examination	78.7%	69.8%
Waiting room is comfortable and quiet	51.1%	39.5%
The department is well organised	66.3%	62.1%
To keep the scheduled admissions	68.8%	57%
Friendliness of the DSU place	66%	72.4%

The SF-12 contains categorical questions (e.g., yes/no) assessing limitations in role functioning as a result of physical and emotional health, three-point scale answers (e.g., limited a lot, limited a little, or not limited at all) assessing limitations in physical activity and physical role functioning, five-point scale answers (e.g., not at all, a little bit, moderately, quite a bit, and extremely) assessing pain, and overall health (excellent, very good, good, fair, and poor) and six-point scale answers (e.g., all of the time, most of the time, a good bit of the time, some of the time, a little of the time, and none of the time) assessing mental health, vitality, and social functioning. The SF-12 was scored using the recommended Medical Outcomes Study (MOS)

Analysis was performed with the statistical package SPSS v.21. Statistical significance was set at $p < 0.05$. Comparison between two variants that had normal distribution was performed with t-test. If the distribution was not normal a Man-Whitney test was performed. For more than two variants if the distribution was normal ANOVA analysis was performed and if not normal Kruskal Wallis. Normality was tested with Kolmogorov-Smirnov test.

RESULTS

Demographics

The study group consisted of 105 patients with breast diseases. They were 104 women (99%) and one man. The mean age was 46.2 ± 13.1 years old. Mean waiting time to admission was 53.1 ± 58.6 days. Twenty-one patients (20%) were admitted more than one times.

In relation to their disease, 29 (32.6%) had fibroadenomas, 18 (20.2%) microcalcifications and fibrocystic disease, 12 (13.5%) breast cancer, 11 (12.4%) in-situ breast carcinoma, 9 (10.1%) papillomas, 7 (7.9%) fibrocystic disease, 2 (2.2%) hamartomas and 1 (1.1%) breast abscess. Two thirds (74.3%) of the patients underwent surgery while, 25.7% of the patients underwent the minimally invasive procedure of stereotactic biopsy (19% mammotome and 6.7% BLES). The patient demographics are shown in Table 2.

Satisfaction scales

Regarding the decision to visit the DSU 72 (68.6%) of the patients were very satisfied, while 66 (62.9%) were very satisfied from their visit. The reasons they chose to visit the DSU were mainly the fact that the hospital is a dedicated oncology hospital (59.2%) and that their medical doctor works in this (55.2%). Most of the patients were very satisfied from their doctors (82%) and even more satisfied from the nurses (86.7%). They were very satisfied

TABLE 2

Demographic and social characteristics of 105 patients (mean age: 46,2 13,1 years)

Variant	N	%
Gender		
Women	104	99
Men	1	1
Education		
Primary	2	1.9
Secondary	51	48.6
University/Polytechnic	52	49.5
Marital Status		
Married	79	75.2
Single	16	15.2
Divorced	8	7.6
Widowed	2	2
Nationality		
Greek	97	92.4
Other	8	7.6
Occupation		
Private sector	27	25.7
Public sector	14	13.3
Teachers	15	14.3
Freelance	8	7.6
Students	5	4.8
Unemployed	8	7.6
Pensioners	10	9.5
Housewives	18	17.2
Insurance		
Insured	98	97.1
Uninsured	7	2.9
Residence		
Attica	72	68.6
Other	33	31.4

from administrative personnel in lower levels (63.5%). The importance attributed by patients on different aspects of health care provided and the degree of patients' satisfaction are shown in Table 1.

They rated as average the quality of health services in Greece (6.4 out of 10) and excellent that of the DSU (8.7 out of 10). They reported as very good their quality of life (7.8 out of 10) and the quality of their health (8.1 out of 10). They rated as very good the safety of public hospitals (8.1 out of 10) and excellent that of the DSU (9.2 out of 10). They were very satisfied from the therapeutic intervention (8.9 out of 10) and experienced low levels of pain (3.9 out of 10). Hence, they were very satisfied from their pain control (8.2 out of 10). Patients' satisfaction scales are seen in Table 3.

E-PQ-SPCSS questionnaire

The patients considered as very important the parts of the questionnaire that refer to the quality characteristics of the personnel and of the facilities of the unit. They want their health providers to be efficient, to pay attention to their needs, and to respect their personality. It is very important to spend time to explain their condition and inform about their progress. The degree of satisfaction was well related to the considered significance of the studied parameter. Satisfaction was poorer in terms of the time dedicated by the doctors to inform the patients, give advice and adherence in the timing of scheduled admissions.

Anxiety questionnaire (HADS)

Half of the patients (n=47; 46.1%) had normal levels of anxiety, 33 (32.4%) borderline pathological and 22 (21.6%) pathological (Figure 1).

In terms of depressive symptoms, 72 patients (71.3%) had normal levels, 26 (25.7%) borderline pathological and 3 (3%) pathological.

SF-12 questionnaire

The results of the physical and mental dimensions of health reported as Physical Component Scores (PCS) and Mental Component Scores (MCS) respectively, are shown in Table 3. The physical health of the patients was found to be around 50 while the mental approximately 49. That means that both the physical and mental status of the participants are considered as excellent.

TABLE 3
Patient satisfaction scales

Question	Mean ± SD
How do you rate quality of health services in Greece (0-10)	6.4 ± 1.9
How do you rate quality of health services in the DSU (0-10)	8.7 ± 1.6
How do you rate the quality of your life (0-10)	7.8 ± 1.4
How do you rate your general health condition (0-10)	8.1 ± 1.1
How safe do you feel in public hospitals (0-10)	8.1 ±1.5
How safe did you feel in the DSU (0-10)	9.2 ± 1.1
How satisfied are you with your therapeutic management (0-10)	8.9 ± 1.6
How much pain did you experience (0=not at all, 10=very much)	3.9 ± 2.5
How satisfied are you with your pain control (0-10)	8.2 ± 2.4

Comparisons between groups

There were no differences in satisfaction between age groups.

The perceived status of health is very good and did not correlate with patient satisfaction.

Patients with university degrees had the most positive perception about their health status while secondary education patients the less positive (p<0.05). Secondary education patients had the higher levels of depression (p<0.05). Primary education patients were the least satisfied from their pain management (p<0.05).

Married patients rated higher the quality of national health services (p<0.05) and feel more safety in public hospitals (p<0.05).

Widowers felt the least safety in the DSU (p<0.05).

The patients who lived in Attica (the area of the hospital) chose the DSU mainly because their doctor works there (p<0.05), while for the patients who lived in rural areas the most important factor was the adherence in the scheduled admissions (p<0.05).

Patients who were admitted for the first time had to wait longer (p<0.05), rated lower the quality of DSU services (p<0.05) and were less satisfied with their therapeutic management (p<0.05). They experienced more pain and were less satisfied form their pain control (p<0.05). They also valued more the adherence in the scheduled admissions (p<0.05).

Patients with benign diseases rated higher the quality of the services of the DSU and were more satisfied with their pain management (p<0.05). For the patients with malignant disease the most important factor was the adherence in the scheduled admissions (p<0.05).

Levels of anxiety were reversely related to the level of education. Patients with depression rated less their health status (p<0.05), the quality of their life (p<0.05) and felt less safety in the DSU (P<0.05).

Patients who were treated with surgery reported significantly lower levels of physical activities (p<0.05). Patients who underwent the minimally invasive procedure of stereotactic biopsy were more satisfied with the information they received (p<0.05).

Waiting time for admission had a very strong negative correlation with patient satisfaction from hospital administration (p<0.001) and strong negative correlation with patient satisfaction from the therapeutic intervention. It had a strong positive correlation with the feeling that the nurse is interested with the patient's problem, very strong correlation with the importance of the friendliness of the doctor and a very strong correlation with the importance of adherence to the scheduled admissions (p<0.001).

DISCUSSION

This study included 105 patients of a total of 134 patients with breast diseases out attending DSU during a 5 months' interval. Twenty-nine patients (21.6%) declined to answer the questionnaires for different reasons. This represents a limitation of our study as their unwillingness to participate could be associated with dissatisfaction for provided services or a degree of anxiety and/or depression.
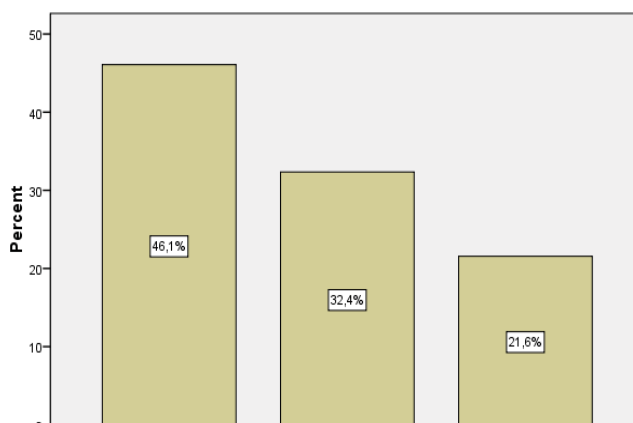

Figure 1) *Levels of anxiety*

Nevertheless, most of the patients that participated were very satisfied with their admission to the DSU. They chose it mainly because of the oncological character of the hospital but also because their physician worked there. Patients were very satisfied from the medical and nursing staff.

Patients rated as average the quality of health services in Greece and as excellent that of the DSU. They reported a very good quality of life and a very good health status.

It is important for the patients that the nurse is interested in their problem and dedicates time to answer their questions. They want their doctor and nurse to be friendly, discreet and have a high professional competence.

Patients with benign disease had higher levels of positive opinion for the quality of the provided health services and the management of pain while patients with malignancy expressed their agony by considering as most important the timely management of their disease. Considering an average waiting time for admission 53.1 days we recognize a field for drastic and immediate interventions. Hence the lower levels in the evaluation of the quality amongst cancer patients.

Approximately half of the patients had pathological levels of anxiety and one third some degree of depression. These patients had limited physical and social activity and experienced more pain compared to patients with normal levels of anxiety and depression. Data from the SF-12 questionnaire showed an excellent perception for the physical and mental health of the patients. Considering that, in conjunction with the findings of the HADS, it is concluded that even relatively minor surgical procedures can produce psychological disturbances. It becomes evident the significance of high-quality services in surgical units.

The factors of care that have been recognized as critical for patient satisfaction are communication, response of the personnel and the hospital environment. When patients are confident for the provided care, it is more possible to be satisfied [12,13].

Many studies have emphasized the importance of adequate information and preoperative training of patients who will undergo DSU and their careers with various approaches including printed material and seminars [14,15]. Training is an important factor in the context of day surgery and so are our findings. Timely information regarding diagnostic and therapeutic procedures as well is very important [16]. The findings of this study are in agreement with these reports, with the highest levels of satisfaction amongst the patients who underwent stereotactic biopsy as nurses spent significantly more time giving information.

Another important prognostic factor of patient satisfaction is the degree of patient respect by the health professionals, which was also confirmed by the findings of our study [13].

CONCLUSION

The quality of services in the Day Surgery setting is very high resulting in high levels of satisfaction by the patients. For patients with malignancy, appropriate schedule of their admission time and interest and information on their management from health care providers are the most important predictive factors of their satisfaction from health services. Patients need emotional support, counselling and information adjusted in the context of Day Care.

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