Improving health performances: To what extent patient satisfaction may influence quality?

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To what extent patient satisfaction may influence quality?

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Abstract

Patient satisfaction constitutes an objective to achieve in the provision of qualitatively adequate health services; it relies on patient involvement, that is obtained through surveys aimed at letting patient to express their opinion on the health care received.

Patients may provide the best source of accurate information, primarily on issues such as clarity of explanations given by physicians or barriers to care, accessibility and cleanliness of health structures. This analysis summarises the experience of a sample of patient interviewed at the University Polyclinic in Messina (Sicily, Italy) and provides a detailed assessment of the satisfaction of patients who experienced health services at different Departments.

Information collected through a specific survey is used to build a dataset with more than 350 observations. Regressors are carefully selected and compared through a radar chart.

A rigorous empirical methodology, based on the estimation of a logistic model, is then applied.

Results outlines how factors relevant for patient satisfaction are related both to the ambulatory where the health care is provided and its characteristics, together with the judgement about the quality of care received by physicians and nurses. Other crucial factors in determining a higher satisfaction were the availability of parking lots, the cleaning of structures and the judgment on physicians, the latter endorsing the high probability of being highly satisfied when expectations on physicians' competences and professionalism are confirmed. The "Contact details", *i.e.* the indications of the people to contact in case of need, strengthen the overall positive experience of patients.

This study enriches the existing literature on patient satisfaction and is aimed at rethinking the organization of the health assistance offered at University Polyclinics, with the primary objective to guarantee the highest patient satisfaction.

1. Introduction

Any approach to care directed at improving health outcomes, as well as patient satisfaction, should be considered among the primary social policymakers' objectives to implement (Sitzia and Wood, 1997; Ford et al., 1997; George and Sanda, 2006; Manary et al., 2012).

Patients' feedback concerning their personal experience may, in particular, highlight areas for quality improvement that physicians and other professionals working at hospitals may have not considered before, although they may detect critical aspects when planning an adequate assistance.

Previous analyses outlined how patients may provide the best source of accurate information, primarily on issues such as clarity of explanations given by physicians or barriers to care (Epstein et al., 1996; Biemer and Lyberg, 2003). The possibility that data collected from patients may be biased, however, is a risk to deal with. Many factors may influence the response; even minor changes in question wording, question order or response format can result in differences in the kind of feedback obtained (Gasquet et al., 2004; Bowling, 2005).

In analyses carried out at given health structures within the same area, furthermore, it is necessary to distribute and use an instrument that may allow comparisons across different settings. In such a case, the aspects potentially more problematic regard both the design and the distribution of the questionnaire: in the instrument design, in fact, there may be response errors, with the consequence of inaccurate answers (Rolstad et al., 2011; Mes et al., 2019).

In Sicily, the Department of Health, together with the Department of Economic, Business and Statistics of the University of Palermo and the Polyclinic Vittorio Emanuele of Catania, has developed a questionnaire, aimed at detecting quality perceived by users in the outpatient clinics of University Hospital. This questionnaire dates back to 2015 and was firstly used the following year. It allows to perform a sample survey, replacing the previous census procedure; for the present analysis, patients have been interviewed telephonically (Murolo et al., 2019).

By using a multivariate logit model, this paper provides a detailed assessment of the satisfaction of patients who experienced health services at different Departments of the Messina University polyclinic. This study enriches the existing literature on measuring patient satisfaction, which has mainly concerned Asian countries, so far, and describes a more efficient statistical approach to select the variables to be included in the estimation.

The results of this investigation could lead to rethinking the organization of the health assistance offered especially at University Polyclinics, with the primary objective to guarantee the highest satisfaction. Physicians working at a University polyclinic are requested to provide health assistance for patient, balancing those activities with teaching and academic research, as well as managerial

responsibilities (Alibrandi et al., 2020). In this perspective, a higher number of duties, characterised by prestige and external exposure, may contribute to build a higher reputation for the physicians that, *per se*, represent a component of patient satisfaction and, consequently, of quality (Weiss, 2017).

The paper is organised as follows: the next section reports the relevant literature dealing with patient satisfaction, followed by the description of the dimensions to include in the analysis that may lead, ultimately, to reflections on quality of care. Then, the tool employed to collect the relevant information (the questionnaire developed at the regional level), some statistics about the observed sample and the econometric model estimated are presented.

The discussion of the results, together with some comments regarding the strategies to follow in order to improve patient satisfaction and, ultimately, healthcare quality, conclude this paper.

2. The concept of patient satisfaction

In the last decade, consumer satisfaction has been gaining growing importance as a measure of quality in many public sector services. In UK, this has become manifest in the call by the 1983 Management inquiry for the NHS, with the aim to ascertain how the service is being delivered at the local level, accomplishing the objective to learn about the experience and perceptions of patients and the whole community (The UK Parliament, 1983). Patient satisfaction is deemed an important outcome measure for health services: there are implicit assumptions about the nature and meaning of expressions of 'satisfaction'. Patients may have a complex set of important and relevant beliefs unlikely to be embodied in terms of common expressions of satisfaction (Williams, 1994). Hence, any research on this topic must first identify the ways and terms in which patients perceive and evaluate the service.

Both researchers, healthcare providers and regulators consider patient satisfaction, together with clinical economic results, a constituent part of healthcare quality (Lin and Kelly, 1995; Hudak and Wright, 2000; Heidegger et al., 2006). Studies relating to patient satisfaction originate in the 1950s in the United States and were initially aimed at studying the doctor-patient interaction (Parsons, 1975). More recently, the analysis of quality of care is the focus of surveys, which take into consideration, together with physicians', the role played by other health professionals such as nurses (Aiken et al., 2012).

Satisfaction is a key factor, pertaining to government policy or, in a private context, required to a successful business. It requires effective and punctual service delivery, cost control, and management

strategies, to implement within health structures. Providing appropriate and qualitatively adequate healthcare is important in building stable institutions and in reinforcing the social state.

Patient satisfaction has been investigated in studies mainly related to eastern Asian and developing countries. Analyses carried out in Pakistan (Shabbir et al., 2016; Manzoor et al., 2019) assess physicians' behavior as a moderating factor between health care quality and patient reported satisfaction. Other studies carried out in Iran and Malaysia examine the satisfaction of patients in private healthcare facilities, or focuses on the quality of outpatient services, examining data collected through questionnaires that look at different dimensions of healthcare (Zarei et al., 2015; Ganasegeran et al., 2015). Such dimensions are, besides staff professionalism, staff reliability and ability in dealing with emergencies, related to aspects as clinic accessibility and basic facilities, such as cleanliness (Deshwal et al., 2014).

The common feature of these works lies on the fact that they are not limited only to the effectiveness of treatments and the physicians' competence for determining patient satisfaction; in these studies, it is reinforced the intuition that satisfaction depends on multiple factors, and patient involvement has to be regarded as a founding element of an efficient clinical governance (Dent and Pahor, 2015).

The ratio underlying the involvement of patients in clinical governance has been described in a study related to the British NHS, which has moved on from being an organisation that simply delivered services to people, to being a service that is totally patient-led and responds to people needs and wishes (Freedman, 2016). It has been observed that patients rarely refer to technical quality information to choose between hospitals; rather, they are more prone to make use of subjective appraisals (such as word-of-mouth) and patient satisfaction is a proxy for such evaluations.

The need to observe quality is stressed, as well, in other contributions developed abroad.

In France, Health Authorities recently produced and made publicly available a wide array of updated quality measures for hospital care (Lescher and Sirven, 2019). In this context, economic theory applied to healthcare markets analyses the interaction between principal and agent; monitoring costs borne by Health Authorities (the principal) to signal hospitals' (the agent) quality, should create incentives for the latter to improve their performances, measured by quality and safety indicators.

A methodology that allows the grouping of various dimensions of health assistance, may be identified in hierarchical models (Otani et al., 2003; Otani et al., 2012).

The issue of quality in health care looks at the role of physicians as providers of care that is both clinically effective and patient centered (Stewart et al., 2000; Farley et al., 2014). When considering patients' characteristics, as an input into the hospital care, may be necessary to let patients eliciting preferences, comprehending and processing the information shared with physicians (Groene, 2011).

The terms "patient satisfaction" and "patients' expectations" are often used interchangeably: patient satisfaction occurs when expectations are fulfilled (AHRQ, 2020). The combination satisfaction-patients' expectations is of major importance in the implementation of the Customer Satisfaction Management model, described, at the European level, by the European Primer on Customer Satisfaction Management report (EUPAN, 2020). According to the conclusions of the report, customers' expectations constitute the starting point for planning an efficient organization. Surverys are the tools through which it is possible to quantify the consumer's experience: in several studies it is shown how patients welcomed the opportunity to be involved and give feedback about the services received (Little et al., 2001; Henriksen et al., 2014; Battaglia et al., 2015).

Many criticisms have been raised about the validity of patient reported measures (Sheard et al., 2019). It has been argued that patient feedback is not credible because they lack formal medical training and because patient satisfaction measures actually capture some aspects of "happiness", that is easily influenced by factors unrelated to care (Manary et al., 2012). A similar criticism is raised in the situation when physician and hospital compensation are tied to patient feedback (Japsen, 2018).

Other final aspects contributing to build patient satisfaction, are the actual experience of the service as reported by people other than the patient, such as family, colleagues, etc. (Abramowitz et al., 1987), the relevance of statements heard from staff members or read on leaflets (Kitching, 1990; Ley, 1992), the gap between patient expectations and reality (The Beryl Institute, 2013).

3. Materials and methods

The present analysis has been carried out on a sample of patients at the Polyclinic hospital in Messina, Sicily, Southern Italy.

In Italy, the collaboration between the National Health Service (NHS) and the universities is carried out through hospital university companies (*aziende ospedaliero universitarie*). The departmental organization is the ordinary operational management model of hospital university companies, to ensure the integrated exercise of care, teaching and research activities. The departments, whose extended denomination is DAI - Integrated Activity Departments (*Dipartimenti ad Attività Integrata* in Italian) are distinguished into complex structures and simple structures. With regard to the Polyclinic hospital of Messina, observed for the present study, five departments have been considered (Surgery, Emergencies, Pediatrics and Obstetrics, Internal Medicine and Specialist Medicines).

3.1 The questionnaire

The questionnaire used for the present survey is part of the activities promoted by the Regional Department for health activities and epidemiological observatory, and has been distributed within the Sicilian University Polyclinics right after 2016.

Other studies stressed the need to monitor the quality of medical care at diverse ambulatory sites (Osterweis and Howell, 1979; Harpole et al., 1996) as in the present case. Together with other dimensions, the questionnaire includes items examining patients' perspectives of physicians' behaviour, and assessing the effectiveness in a medical consultation, that depends on professionalism, interpersonal and communication skills.

The questionnaire looks at different phases in healthcare provision: the first phase relates to what happens before the visit (booking, getting to the hospital, ticket payment); the second one concerns the service received, and can be split into two moments: 1) getting to the hospital (access to the structure, parking) and receiving the medical consultation (waiting time, comfort, cleanliness of the ambulatory, medical and nursing staff behaviour); the third phase regards the patient's experience after the visit (more specifically, the information received about the therapy that should be followed and the contact details about the people to call in case of necessity, the easiness in getting the medical results); finally, there are some questions related to the perceived effectiveness of medical treatment and the overall evaluation of the service.

In a polyclinic hospital, patients will evaluate positively elements related to accessibility, such as the ease of parking inside the structure and, consequently, the possibility of reaching the ambulatory without problems, rather than concerning about architectural barriers, whose removal, nowadays is common practice in healthcare structures (Church and Marston, 2003).
The dimensions of the survey that impact more on the overall quality of the service, and for this reason, are employed in the estimation, are reported in Table 1.

Table 1 – Description of relevant variables in the administered questionnaire

Variables	Possible answers	Values	Definition
Ease of booking	No	0	The "Ease of booking" variable is a dummy variable associated with value = 1 if the visit was easy to book and = 0 otherwise.
	Yes	1	
Time between booking and medical consultation	72 hours or less	1	This variable is an ordinal variable, with values between 1 and 5. In particular, the longer the time elapsed from the booking to the medical consultation, the higher the value of this variable.
	10 days or less	2	
	30 days or less	3	
	160 days or less	4	
	Over 160 days	5	
Parking	Definitely no	1	These ordinal variables assume values between 1 and 4. In detail, the higher the opinion expressed, the higher the score associated. When estimating the models, these variables have been converted into dummy variables, whose possible values are1 and 0, and 1 is associated to the replies "More yes than no" or "Definitely yes" and 0 otherwise.
	More no than yes	2	
	More yes than no	3	
	Definitely yes	4	
Architectural barriers	Definitely no	1	
	More no than yes	2	
	More yes than no	3	
	Definitely yes	4	
Punctuality	Definitely no	1	
	More no than yes	2	
	More yes than no	3	
	Definitely yes	4	
Cleanliness	Definitely no	1	
	More no than yes	2	
	More yes than no	3	
	Definitely yes	4	
Judgment on nurses	Definitely no	1	
	More no than yes	2	
	More yes than no	3	
	Definitely yes	4	
Judgment on physicians	Definitely no	1	
	More no than yes	2	
	More yes than no	3	
	Definitely yes	4	
Ease of collecting reports	Definitely no	1	
	More no than yes	2	
	More yes than no	3	
	Definitely yes	4	
Information about therapy	Definitely no	1	
	More no than yes	2	
	More yes than no	3	
	Definitely yes	4	
Contact details	Definitely no	1	
	More no than yes	2	
	More yes than no	3	
	Definitely yes	4	

These dimensions can be explained as follows:

- "Ease of booking" means that the patients replied he/she has not encountered any difficulty in making a reservation to receive a medical consultation and/or a clinical examination. Modalities of booking include telephone booking, unless the patient has to return to the ambulatory for monitoring his/her health condition (as in the case of control visits). The expected characteristics of the scheduling system for patients' appointments have been investigated in some studies (Akinode and Oloruntoba, 2007).

- "Time between booking and visit" says how long the patient had to wait since the time of booking to the visit or clinical examination. Waiting times have been examined in international comparisons (Helbig et al. 2009), concluding that their reduction is related to quality management and can improve efficiency (Viberg et al., 2013).

- "Parking" is represented through a dummy variable, as well as "Architectural barriers", that refers to the patient's perception of the existence of obstacles that limit or complicate access to the ambulatory, especially for disabled users.

- "Punctuality" means that there has not been any delay in undergoing the medical visit or no.

- "Cleanliness" summarises the satisfaction or dissatisfaction about the cleaning conditions of waiting rooms, where the patient waits before undergoing the visit or the clinical examination. Other literature studies identified and analysed these dimensions (Rahimi et al., 2017).

- "Judgment on nurses" is justified by the consideration that nurses play a major role in improving patient outcomes. Patients feel comfortable when nurses encourage them to open up about their level of pain and discomfort (Rahimi et al., 2017).

- "Judgment on physicians" refers to the other personnel involved in the relationship with patients and results from the combination of three factors (clarity, competence and punctuality). Physicians represents the key figure in the patient care process; certainly, their kindness and competence are desirable and decisive elements in the evaluation of the patient about the service received.

- "Ease of collecting reports" refers to the ease with which the patient manages to collect the report of the consultation (Ahmadian et al., 2014).

- "Information about therapy" summarises the satisfaction or dissatisfaction regarding the therapy prescribed after the consultation, provided by the physician.

- "Contact details" expresses the satisfaction or dissatisfaction for the information received about people to call in case of need (Brody et al., 1989).

3.2 The observed sample

The questionnaire has been administered during 2019. The schedule for the distribution of the interviews envisages that 228 questionnaires have to be collected every four months, within the various operating units. A specific sampling fraction is used in each operating unit and varies according to the number of annual visits and/or medical examinations carried out (Murolo et al., 2019).

Overall, 456 patients, were asked to reply to the questionnaire. They provided some personal information (mainly socio-demographic data, as gender, age, education, etc.) as well.

Table 2 shows the respondents' characteristics.

Table 2 – Patients distribution according to personal information

Variables	Modalities	%	Other information
Age	<18	2,4	The patients' age is, on average, almost 55 with a std. deviation of roughly 19 years.
	18-35	16,7	
	36-50	19,1	
	51-65	26,8	
	66-85	33,3	
	>85	1,8	
Gender	Males	39,7	
	Females	60,3	
Education	None or Primary school	16,8	
	Compulsory education	32,7	
	Higher education	39,7	
	Graduate education	10,9	
Birthplace	Messina	52,1	
	Messina Province	22,4	
	Other Sicilian provinces	11,0	
	Calabrian towns	8,6	
	Other Italian towns	2,9	
	Abroad	3,1	

The questionnaire was administered few days after the visit, to allow patients to be more relaxed comparing to the time just after the visit/clinical examination, so that they may recall their experience more clearly and express reliable judgments.

The anonymity of the answers, guaranteed to all responding patients, ensures the truthfulness of the declarations (Settineri et al., 2010; Joseph and Rajiv, 2015). The sample is representative of the patient population who underwent a medical consultation at the polyclinic of Messina.

3.3. Statistical analysis

Statistical analysis aims at explaining the satisfaction expressed by patient. In order to identify the factors that exert a significant influence on satisfaction, a binary logistic regression model has been estimated (Kleinbaum et al., 2013).

The dependent variable is the likelihood to declare a high level of satisfaction (9-10 on a scale from 0 to 10, with, overall, the greater frequency of responses higher than 6); the original numerical variable has therefore been dichotomised.

Qualitative models are frequently used to assess patient satisfaction (Shan et al., 2016; Stepurko et al., 2016; Meng et al., 2018; Djambazov et al., 2019; De Paula Amorim et al., 2019; Liu et al., 2019).

Among all possible predictors, some demographic variables (age, gender and education) and some dummy variables related to the departments (value = 1 if the patient accessed a specific department and = 0 otherwise) were used. In addition, it was included a set of patient satisfaction indicators, related both to the structure and the service received ((Ease of booking, Time between booking and visit, Parking lots and Architectural barriers; Punctuality, Cleanliness, Judgment on nurses, Judgment on physicians, Ease of collecting reports, Information about therapy and Contact details).

In order to identify the potentially predictive factors of the response variable, univariate logistic regression models were estimated, thus obtaining the Crude Odds Ratio (OR); through this procedure the predictive power of each regressor was verified.

Then, a multivariate logistic regression model was estimated, to obtain the Adjusted OR; it was used a stepwise procedure, that requires the estimation of multiple multivariate models in an iterative sequence that eliminate, each time, the less significant regressor of the immediately preceding model.

Finally, the goodness-of-fit of the final model was evaluated through the calculation of global and the local success rates and the estimation of Pearson and deviance tests (Discacciati et al., 2017).

4. Results and discussion

Table 3 reports the main seven patient satisfaction indicators: for each of them, the arithmetic mean and the standard deviation are reported.

Table 3 - Descriptive statistics of patient satisfaction indicators

Variables	Mean ± SD
Punctuality	3,59 ± 0,79
Cleanliness	3,58 ± 0,75
Judgment on nurses	3,89 ± 0,37
Judgment on physicians	3,92 ± 0,32
Ease of collecting reports	3,34 ± 0,92
Information about therapy	3,72 ± 0,76
Contact details	3,60 ± 0,92

All the judgments expressed are highly positive; among all, the highest average value is observable for judgment on physicians. The low variability of the data denotes that the respondents' judgments are quite similar and the values tend to be close to the mean.

Keeping into account these preliminary results, corroborated by a radar chart analysis, reported in the Appendix, a logistic model was estimated, whose results can be seen in Table 4: in particular, with regard to the multivariate model, the final model, obtained at the tenth iteration of the stepwise procedure, is reported.

Table 4 – Results of Logistic Regression Models for patient satisfaction

Independent Variables	Univariate Models			Multivariate Model		
	Crude OR	95% C.I.	p-value	Adjusted OR	95% C.I.	p-value
Age	1.01	1.00-1.02	0.166			
Gender	1.32	0.90-1.92	0.153			
Education	0.89	0.73-1.10	0.297	0.78	0.59-1.03	0.081
DAI – Surgery	0.91	0.60-1.38	0.652	0.60	0.33-1.10	0.098
DAI – Emergencies	0.90	0.59-1.35	0.595	0.48	0.26-0.89	**0.019**
DAI – Pediatrics and Obstetrics	1.49	0.75-2.95	0.259			
DAI – Internal Medicine	1.27	0.74-2.17	0.388	.		
DAI – Specialist Medicine	0.91	0.60-1.40	0.676			
Ease of booking	3,84	1.82-8.13	**<0.001**			
Time elapsed between booking and visit	0.81	0.69-0.95	**0.009**			
Parking lots	1.73	1.16-2.56	**0.007**	1.88	1,12-3,15	**0.017**
Architectural barriers	1.09	0.69-1.72	0.726			
Punctuality	3.81	1.96-7.41	**<0.001**			
Cleanliness	6.78	3.09-14.91	**<0.001**	4.18	1.58-11.09	**0004**
Judgment on nurses	8.68	1.06-7.14	**0.044**			
Judgment on physicians	3.26	1,53-6,95	**0.002**	2.58	1.01-6.63	**0.048**
Ease of collecting reports	1.06	0.56-2.02	0.851			
Information about therapy	3.47	1.63-7.39	**0.001**			
Contact details	3.28	1.77-6.07	**<0.001**	3.99	1.58-10.09	**0.004**

The demographic variables and the DAI dummies are not significant in the univariate model. Instead, the final multivariate model shows a significant p-value for Emergencies DAI and for some regressors, already significant in univariate analyses ("Parking lots", "Cleaning", "Judgment about physicians" and "Contact details").

In particular, the low OR value for Emergencies DAI may reveal the criticities in organizing the activities of this DAI, because of the high number of patients who access yearly the Emergency DAI (27.6% of the total number of patients in the sample) and an insufficient health personnel.

The "Parking lots" variable records an OR value greater than 1: this may be explained by the consideration that the town of Messina, where the survey has been carried out, is characterized by an underperforming public transport service; patients may, therefore, be pushed to get to the Policlynic driving, hence considering availability of parking highly decisive.

Once the patient has reached the ambulatory, and is waiting for the medical consultation and/or clinical examination, he/she will pay attention to other factors unrelated with medical care, such as the cleaning of surrounding rooms: the "Cleanliness" indicator shows an OR value greater than four. Instead, the "Judgment on physicians" confirms the high probability of being highly satisfied when expectations on physicians' competences and professionalism are confirmed.

The "Contact details", *i.e.* the indications of the people to contact in case of need, confirm the overall positive experience of patients: the high cost opportunity for the patient (due to the time spent to book the visit/clinical exam, travelling to the hospital, parking and waiting to receive medical care), is compensated by the health personnel expertise and skills.

Considering jointly the results of the univariate and multivariate models estimated, some factors gain significance and can therefore be interpreted in a more comprehensive framework, such as the dummy variable related to the department dealing with Emergencies.

The opposite conclusion can be true as well: some significant regressors in the univariate estimations are not meaningful in the multivariate model.

After carrying out the estimation of the multivariate model, the tests to measure the goodness-of-fit were estimated, whose results, that are available on request, can be summarised as follows:

a) a highly significant p-value of the final model, that ensures that the inclusion of more explanatory variables significantly increases the information and predictive quality of the model;

b) conversely, a non-significance of the Deviance test and the Pearson test, that leads to accept the hypothesis according to which there are no significant differences between the observed and theoretical values from the logistic regression model.

Overall, the findings confirm the usefulness of surveys that allow a greater involvement of the patient.

The estimation of logistic regressions fulfil the objective to identify which factors are crucial when strategies to improve healthcare quality should be developed.

In this process, patients' are empowered, since they can express their satisfaction and are active part in suggesting the dimensions to correct to improve the service (Andrzejewski and Lagua, 1997). Some limitations of this study must be outlined. The judgment on the skills of the doctors is affected by possible bias: the patient undergoing the health service will, in any case, be satisfied (he is the one choosing the Polyclinic hospital, making the reservation and waiting for the scheduled day when the visit or clinical examination will take place). The data used were collected from a convenience sample, without a prior selection of the sample for the study. Furthermore, the possibility that it may be a seasonality problem, linked to a greater frequency of control visits in certain periods, for example, to participate in screening campaigns, cannot be excluded.

Given the importance of the study, which highlight the elements that can improve quality in patients' perspectives, it would be appropriate to widen the dataset used, and to extend the analysis also to other Polyclinics in the same Region or across different countries.

4. **Conclusions**

The analysis presented in this paper extends the empirical literature on the assessment of patient satisfaction, employing a rigorous empirical methodology to select the variables to include in the model; the results are more reliable and efficient than those derived in pre-existing studies.

The procedure for selecting the variables, could be replicated in other studies to be carried out in similar contexts. In addition, the impact of the organization where health care is provided may be considered, including, as it has been done in this survey, dummy variables referring to individual departments of integrated activities (DAI): the latter, in fact, may signal the departments where the provision of care is more controversial.

Finally, this study adheres to the interpretation, consolidated in the literature, which sees patient satisfaction among the elements that constitute the quality of health services.

Indications are given about the aspects to enhance in order to continue guaranteeing patient satisfaction and the quality of healthcare services. For all these reasons, policymakers are the subjects primarily interested in the issues explored.

Appendix

Figure 1 shows a radar chart realized to compare the different indicators measured on the same scale (Scott Logic, 2011). This is the ideal tool for displaying which indicators record the best performances.

Figure 1 - Radar chart related to patients satisfaction indicators
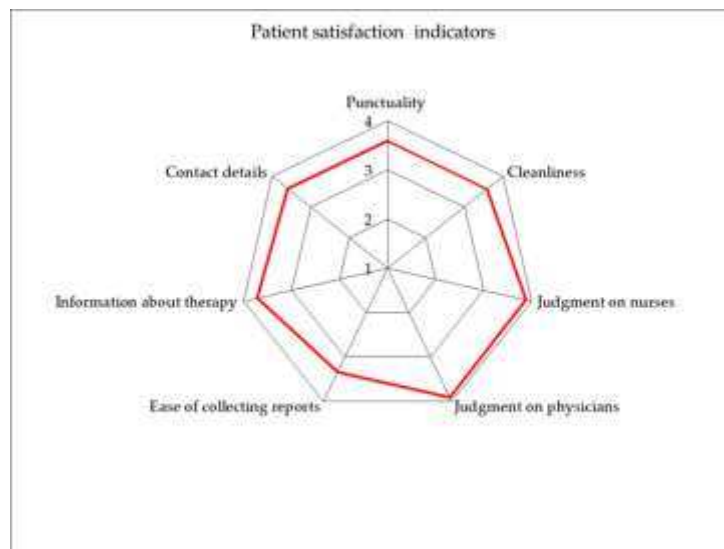
The indicators with the highest values refer to the health personnel (both physicians and nurses). With the exception of the item related to the Ease of collecting reports (Esposito, 2014), that has the lowest value among all the indicators (average value of 3.34 out of 5), the judgment about nurses and physicians presents, on the other hand, extremely positive assessments (average values of 3.88 and 3.91), hence expressing high consideration for health professionals' work.

With regard to the indicators selected for the pre-visit phase "Cleanliness" and "Punctuality", they show more modest results comparing to the other indicators.

The indicators "Information about therapy" and "Contact details", show satisfying results (the highest average value was observed for the provision of details about whom contact in case of need).

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