

STAKEHOLDERS' SATISFACTION MEASUREMENT IN THE ENVIRONMENT OF PUBLIC HOSPITALS' NURSING SERVICES

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Abstract

The purpose of this study is to examine the satisfaction of three stakeholders (the nursing staff, the heads of nursing units and the patients) in order for the management to collect the necessary data and foster a culture of accountability and continuous learning with regard to the provision of healthcare services. With the dissemination of such organizational culture, top management can develop a philosophy and mentality that promotes the continuous improvement of nursing services.

Methods: *The answers were collected via three questionnaires that were distributed to a variety of population groups, namely: a) the heads of nursing units, b) the employees (nursing staff), and c) the patients were served at the Public General Hospital of Serres, in Northern Greece. The subject in question was examined using the six point-Likert scale and quantitative methods have led to the collection of reliable data.*

Results: *The current study explored the relationships between organizational procedures' operation by the top management with employees' and patients' satisfaction. Results of the analysis show that the continuous improvement of the organizational procedures significantly affects the positive perceptions of the nursing staff. On the other hand, the results revealed that there aren't significant relationships between the aspects of patients' satisfaction with the nursing staff's satisfaction.*

Implications: *Management planning in healthcare services is absolutely essential, and the process of planning depends on the identification of organizational goals in relation to the implemented procedures. The motivation of the nursing staff and the continuous improvement of procedures depend on the continuous measurement of procedures through the feedback based on staff's perceptions.*

Keywords: *Public hospitals' management, organizational procedures, organizational learning, employees' satisfaction, customers' satisfaction.*

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INTRODUCTION

Public hospitals are organizations offering a social commodity that of health, which holds a primary position on the scale of human values-needs. The effectiveness and efficiency of any Healthcare system depend on effective leadership which involves continuous improvement of organizational procedures in order to meet the needs of the workforce, the patients, and of the whole society, for proper healthcare services.

The present study focuses on the public healthcare sector and specifically, investigates organizational procedures and the efficiency of management through a satisfaction survey of the main stakeholders of nursing services and their impact on the provided healthcare services in the environment of Directorate of Nursing Services at Public Hospitals. The results through staff's and customers' perceptions measurement provide valuable information that concerns the relationships between the above concepts and also can be used as feedback and data for the top management's planning.

The data analysis of the stakeholders' survey examines the strengths and weaknesses of management actions and organizational procedures' operation for the continuous quality improvement of the nursing services. As far as organizational procedures in the field of hospital public health are concerned, those of the nursing services contribute effectively to achieving the mission of the hospital's strategy. In the sector of public hospitals, procedures pertaining to nursing services are related to the majority of the workforce and their results have a direct impact on the main customers of the hospital (patients). Thus, the present study chose to examine nursing services due to their major impact both on the internal and external hospital environment and also due to the close contact of the nursing staff with the external customers (patients). Moreover, nursing procedures are directly related to the actions of the medical staff and are connected with several administrative functions (e.g. with the supplies and HR departments), while the immediate or end-users of their output are the citizens as patients, their relatives and the whole society.

By measurement and surveys' implementation, the hospital's top management and the department heads of the nursing units can be aware and manage any problematic area by creating a mid-term improvement program, supporting the strategic management in prioritizing actions, and outlining the action plan, based on continuous feedback.

This study perspective is essential both for enhancing satisfaction and perception measurement immediate effect and for improving organizational procedures by practical-applied approaches and methods as a means to increase the efficiency and effectiveness of nursing services of hospitals in the specific sector of public healthcare.

THEORETICAL FRAMEWORK

The demand for public services that focus on the needs of all stakeholders necessitates the adoption of best practices used in modern governance based on a strategy with clear goals (Michalopoulos N., 2003). Management planning in healthcare services is absolutely essential, and the process of planning depends on the identification of the organizational goals in relation to the procedures implemented, the motivation of the healthcare staff, and the measurement for the rational allocation of all resources. The differentiation caused by specialisation in healthcare professions and the varying levels of decision-making and initiatives, makes the management of such organisations very demanding (Sigalas, 1999). Effective management sets realistic and achievable goals by using stakeholders' surveys in order to shape appropriate strategies (EIPA & EUPAN, 2013). The implementation of the strategic management is a powerful tool in the hands of leaders and helps them to make rational decisions in conditions of uncertainty. For Johnston, R, Clark, R. & Shulver, M. (2012) the phases of the strategy are:

1. analysis configuration and strategy choice
2. application - implementation strategy
3. evaluation strategy

Additionally, the most important factor for the success of any organization is its workforce. The more enjoyable and interesting the work the employees undertake, and the more they take part in decision-making, the more decisively they will contribute to the organisation's efficient operation (Leopold, 2002). Most employees have to put their knowledge to good use on a daily basis so as to carry out their work through the application of procedures, based on their own background, perspective, educational needs and certification procedures (Drucker, 2006). It is necessary for reforms to "provide a specific outlook" surrounding their role - to welcome human expectations, adapt them to the needs of the organization, and direct them to the realization of its goals. Reforms are implemented when a public organization aims at reshaping modes of action, employee roles, and motivation" (Tsivakou, 1999).

Thus, through knowledge management and human resource management, the existence of the organization's available knowledge capital contributes to making more credible and informed decisions in the specific environment of the Healthcare sector. Furthermore, even when the dissemination of knowledge involves cases of medical errors, it can contribute to the process of learning by identifying the omissions made in earlier cases of patient treatment, thus leading to better healthcare.

Knowledge Management is a philosophy of exploiting the power of knowledge in today's age of competition and lack of resources. In the administration of public hospitals, in particular, the implementation of knowledge management strategies can help reduce mistakes, which is extremely important for improving the quality of the healthcare services provided (Karamitri, 2016).

The operation of any healthcare system is based to a large extent on the labor coefficient, which is why it is described as a labor intensive system. Human resources as a whole participate in the provision of healthcare services, with the medical and nursing staff being responsible for their allocation. A healthcare service with a culture that embraces quality as the responsibility of each staff member has a better chance of showing major and continuous improvement (Draper et al., 2008). Thus, the role of human resources is particularly vital for the smooth operation of healthcare bodies. The selection, training, and suitable use of the staff are preconditions for the correct organization and functioning of such institutions.

When a patient contacts healthcare services in order to receive treatment for a health problem, a specific process is implemented that begins with the diagnosis of the disease, continues with selecting the most appropriate pharmaceutical treatment, and ends with the patient's recuperation. This process, apart from the involvement of the medical and nursing staff, also includes the participation of other scientists, such as biologists, radiation physicists, psychologists, dieticians, pharmacists, physical therapists, etc. Undoubtedly, all these procedures are supported by the nursing staff. The Nursing Service structure includes a range of specializations with different levels of training.

The theoretical framework of the study investigates the following aspects of healthcare operation in this specific sector of Greek reality and examines:

- a.** the extent of opportunities for open communication and for undertaking initiatives that focus on the effectiveness and efficiency of the nursing staff, and
- b.** whether employees' involvement in decision making and thus the development of their commitment and loyalty to the organization are increased, as well as an emphasis on innovation and competitiveness is promoted, through the continuous measurement and refinement of procedures.

The empirical study sheds light through its hypotheses on the management actions of top management:

HYPOTHESIS 1: The continuous improvements of the organizational procedures by taking into account the proposals and perceptions of staff significantly affect employees' satisfaction.

HYPOTHESIS 2: Skills Development and Planning are key management factors that significantly affect the positive perceptions of the nursing staff.

HYPOTHESIS 3: The organizational culture of learning and the dissemination of knowledge capital significantly affect the positive perceptions of the nursing staff.

HYPOTHESIS 4: There is a significant relationship between the satisfaction of the nursing staff and patients' perceptions.

Such regular measurement of management actions and stakeholders' satisfaction and its results can be used as valuable information and feedback in the disposal of hospital leaders for the execution of effective leadership.

METHODOLOGY AND SAMPLE

The research population comes from the General Hospital of Serres, which provides its services to one of the largest prefectures in Greece. The city of Serres ranks in the list of the top ten cities in Greece with regard to its population. The study was conducted in the city of Serres during the last quarter of 2018. The General Hospital of Serres is categorized as a large-scale institution and its total capacity is set at four hundred and fifty (450) organic beds, of which fifty (50) belong to the Centre of Physical Medicine and Rehabilitation (KEFIAP). Nursing Service is the research field under investigation with a population of 400 employees. In line with the most recent publication of the Hospital's Organization in OGG 3323_B_2012, the Directorate of Nursing Services is structured according to the following divisions, which also function as Subdirectories:

1st NURSING DIVISION: the departments covering the Pathology Sector of Medical Services.

2nd NURSING DIVISION: the departments covering the Surgical Sector of Medical Services and the Operating Theatres.

3rd NURSING DIVISION: the departments covering the Mental Health Sector of Medical Services.

4th NURSING DIVISION: the departments covering the Laboratories, the Intersectional Departments, and the Outpatients' Departments of Medical Services.

The research methodology aimed to give the opportunity to all members of the nursing personnel (the heads of nursing units and existing staff) to express their views and satisfaction regarding the role of management, with regard to the procedures followed and the organizational culture adopted in the workplace. In addition, a patient perception survey was conducted which focused on the provided nursing services. It is important, apart from examining internal customers, to also investigate the views of external customers. The study of the views of all the main stakeholders created the context for a number of comparisons that led us to identify specific relationships and reliable conclusions.

The setting for this study consists of the distribution of two questionnaires. The heads of the nursing units answered the first questionnaire and their perceptions on management issues and the continuous revision of procedures was depicted.

Moreover, the study relied on primary data obtained from the nursing staff of Serres Hospital through the same questionnaire.

Finally, the study relied on data from its key customers, which are the patients as main users of the nursing services. All the relevant research information has been collected with the support of the hospital's top management.

According to the methodological approach, the regression was estimated using the ordinary least squares method (OLS) and the OLOGIT analysis. The results concerning the independent and dependent variables are also analyzed descriptively per question and are classified at a low to medium level for answers 0-2 of the rating scale and at a medium to a high level for answers 3-5 of the rating scale.

The descriptive analysis investigated the level of organizational procedures improvement and efficient management actions application with regard to the nursing service and highlights the best practices according to the perceptions of the heads of nursing units, as well as the nursing staff. Moreover, the descriptive analysis examined the patients' perceptions for the nursing care they received.

The content of the research is the effect of the continuous improvement of organizational procedures and of management actions on the nursing staff's and patients' satisfaction.

The approval of the research hypotheses involved two levels and two distinct studies were carried out for their control.

The first study investigated the effect of the identification, design, and management of innovative organizational procedures on an ongoing basis, on nursing staff's satisfaction.

It also examined the effect of the organizational procedures and management actions as drivers (in five separate groups) on each satisfaction parameter. This study investigated the effect and the significance of five management factors on specific satisfaction parameters. This information could be used as valuable data for leadership in order to formulate the hospital's strategy based on evidence-data information.

The second study examined the patients' satisfaction. Information was collected regarding: quantity, quality, reliability, transparency, understanding of information, its suitability vis-à-vis the target group, etc. In addition, the research examined whether correct information was given to customers/patients and if their observations and suggestions were taken into account. The relationship between patients' survey with the nursing staff's satisfaction survey was the main object under investigation.

RESULTS AND DISCUSSION

The reliability for each factor (five management factors) as well as the overall questionnaire were tested with index Cronbach α (Cronbach, L. J., 1951), which produced the following results:

Cronbach's alpha: $\alpha_1 = 0.7$, std (all Independent variables - all five groups together)

Average interitem correlation: 0.2310

Number of items in the scale: 37

Scale reliability coefficient: 0.9174.

Cronbach's alpha: $\alpha_1 = 0.818$, std (Both dependent and independent variables)

Average interitem correlation: 0.2397

Number of items in the scale: 55

Scale reliability coefficient: 0.9455

The contributions of the research are revealed in the results of these separate studies and are listed below:

The first study revealed that organizational procedures and management actions have a positive impact on the perceptions of the nursing staff at a significance level of 1% ($p < 0.01$).

Table 1: mean – mean. According to the methodological approach, the regression was estimated using the ordinary least squares method (ols).

Dependent variable: mean of questions on the nursing staff perceptions	
mean_IV	0.835*** (0.0972)
Constant	0.270 (0.196)
Observations	103
R-squared	0.541

Note: Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1.

The first study also confirmed that the identification, design, and management of innovative organizational procedures on an ongoing basis, which involves all stakeholders, have a greater impact on satisfaction than other factors.

Table 2: mean – mean of 5 factors. OLS regression for each factor. Dependent variable: mean of questions on the perception measurement of the nursing staff concerning the management of the hospital.

	(1)	(2)	(3)	(4)	(5)
mean_IVa	0.523*** (0.0891)				
mean_IVb		0.406*** (0.0971)			
mean_IVc			0.382*** (0.0806)		
mean_IVd				0.509*** (0.0828)	
mean_IVe					0.395*** (0.0843)
Constant	0.916*** (0.181)	1.097*** (0.202)	1.242*** (0.147)	0.927*** (0.158)	1.145*** (0.168)
Observations	103	103	103	103	103
R-squared	0.395	0.252	0.222	0.311	0.248

Note: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

It also examined the effect of the organizational procedures and management actions (in five groups), on each satisfaction parameter. This study revealed that each group affects significantly specific satisfaction parameters. This information could be used as valuable data for leadership in order to formulate the hospital's strategy based on evidence-data information.

Table 3: each question – mean. OLOGIT regression analysis. Dependent variable: each question of the perceptions of the nursing staff concerning the 5 management factors under investigation.

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4	(5) Model 5	(6) Model 6	(7) Model 7	(8) Model 8	(9) Model 9
mean_IVa	1.320*** (0.428)	1.082*** (0.390)	0.310 (0.418)	0.291 (0.471)	0.814 (0.870)	2.027*** (0.495)	0.438 (0.362)	1.037 (0.700)	0.353 (0.467)
mean_IVb	0.696* (0.388)	0.380 (0.447)	0.936** (0.401)	0.606 (0.412)	0.713 (0.605)	0.228 (0.564)	0.938*** (0.346)	0.485 (0.482)	1.143** (0.511)
mean_IVc	0.177 (0.421)	0.322 (0.446)	0.149 (0.495)	-0.301 (0.551)	2.108*** (0.721)	2.152*** (0.650)	-0.0958 (0.433)	-0.988 (0.665)	-0.0419 (0.596)
mean_IVd	-0.871 (0.864)	-1.451** (0.685)	1.230* (0.649)	-0.813 (0.700)	-0.511 (0.600)	0.477 (0.868)	3.112*** (0.830)	0.930 (0.668)	1.121 (0.802)
mean_IVe	0.802 (0.609)	1.231** (0.553)	1.589** (0.647)	1.124** (0.558)	0.510 (0.613)	-0.676 (0.706)	-0.191 (0.654)	2.169** (0.847)	0.978 (0.704)
VARIABLES	(10) Model 10	(11) Model 11	(12) Model 12	(13) Model 13	(14) Model 14	(15) Model 15	(16) Model 16	(17) Model 17	(18) Model 18
mean_IVa	0.623 (0.675)	0.914* (0.471)	0.884** (0.424)	0.705 (0.548)	1.048** (0.420)	1.734*** (0.537)	0.903 (0.715)	2.212*** (0.558)	1.130*** (0.385)
mean_IVb	1.299** (0.586)	-0.348 (0.452)	0.259 (0.437)	0.0644 (0.428)	0.267 (0.364)	-0.256 (0.457)	0.108 (0.571)	0.0918 (0.579)	0.302 (0.353)
mean_IVc	-0.427 (0.547)	-0.507 (0.476)	-0.517 (0.458)	-0.412 (0.467)	-0.510 (0.458)	-0.430 (0.435)	1.556** (0.639)	0.118 (0.551)	-0.555 (0.542)
mean_IVd	1.877** (0.789)	1.911*** (0.708)	1.217 (0.864)	2.157*** (0.666)	1.908** (0.776)	1.759*** (0.671)	0.553 (0.733)	0.513 (0.740)	3.725*** (0.596)
mean_IVe	-0.289 (0.538)	-0.174 (0.464)	-0.629 (0.500)	-0.779 (0.479)	-1.054** (0.418)	-0.396 (0.555)	-0.767 (0.572)	0.485 (0.599)	-0.177 (0.746)

The second study showed that there is not a significant relationship between the two stakeholders' surveys (nursing staff and patients). As far as the last 4th Hypothesis is concerned it was used the 1st Approach: mean – mean (OLS regression analysis) and the 2nd Approach: each question – mean (OLOGIT regression analysis). Both approaches didn't reach significant results that approve the relationship between patients' perceptions with the nursing staff's satisfaction. Moreover, the descriptive analysis showed that patients assessed the nursing staff's behavior and the environment in which they received care with very high scores.

The two-level study reached to the evidence to justify the three of the four Hypotheses and the formulation of proven conclusions of which the main findings are:

- As procedures continuously are improved, employees tend to feel more satisfied with the overall picture their organization presents to the broader community in which it operates. Furthermore, the constant improvement of procedures gives the nursing staff a sense of greater participation in decision-making and consequently makes them feel more satisfied with the hospital's style of management.
- Skills' development actions are perceived as a reward and recognition by the nursing staff which motivates their performance. It is also of key-value the enhancement of their skills, which aims to contribute to the attainment of specific goals aligned with the hospital's strategy.
- The more the organization's management is based on the dissemination of knowledge and the provision of the organizational culture of learning, the more the satisfaction of the nursing staff increases.
- Descriptive analysis showed either the best management actions implemented or the lowest ratings and revealed the problematic management fields which are in need of improvement actions according to the perceptions of the three stakeholders of the Directorate of Nursing Service (heads of nursing units, staff, and patients).

- There is not a significant relationship between the patients' survey with the nursing staff's satisfaction survey. The quality of the provided services was characterized by high scores on transparency, equality, respect, open communication, reliability, and advice-instructions, which were depicted via the questionnaire with a high score. The high level of their satisfaction stems from the fact that they had personal contact with the nursing staff, and this created a relationship of greater trust. On the other hand, as far as the nursing procedures are concerned, this factor cannot be assessed in-depth, due to the fact that the interviewees do not possess scientific knowledge relevant to the field of nursing care.

This empirical research is limited to the specific field of the nursing services provided in Serres hospital. Hence, the structural model of measurement is suggested for its implementation in other public institutions, and also in other geographical areas of the country. Furthermore, in the case of public hospitals, it would be interesting to obtain an assessment of the nursing services by other relevant stakeholders, as users of the nursing services, except for the patients. Further research could examine the views of other target groups (medical staff, administrative staff, etc.) since they are able to assess the provided nursing services in-depth, due to their scientific and administrative knowledge. Furthermore, the expectations of external customers/citizens could be examined, through an analysis of the needs of the social environment and a focus on the basic requirements of society from the relevant services.

The Directorate's of the Nursing Service efficiency and effectiveness, through the continuous improvement of the organizational procedures and the enhancement of employees' motivation and patients' satisfaction, provides the society qualitative provided services.

The findings of this study can be applied to assist hospital management. In this way, the organizational-administrative and financial-management functions of the hospital are connected with organizational nursing procedures, skills development, and knowledge dissemination into the environment of the nursing staff population as parts of the whole hospital's strategy.

Hence, this study can substantially contribute to the enrichment of the international literature through the development and control of a structural model that supports the positive impact of measuring management actions and implementing stakeholders' surveys on the promotion of an organizational culture of quality, learning and innovation.

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