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# The impact of internal service quality and learning organization on clinical leaders' job satisfaction in hospital care services

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## Abstract

**Purpose** – This survey aims to investigate the perceptions of clinical leaders in hospital care services in the context of the Greek public health system, to define the impact of internal service quality characteristics and learning organization dimensions on job satisfaction.

**Design/methodology/approach** – The sample comprised doctors – department heads of 123 clinical departments of basic medical specialties operating in 15 hospitals and was addressed by the use of a questionnaire specifically designed for the purposes of this research effort. The results were processed with the use of exploratory factor analysis and multiple linear regression was applied.

**Findings** – The research results revealed a positive impact of interactive internal service quality characteristics and learning organization dimensions, namely, empowerment and continuous learning, on job satisfaction in hospital care services.

**Originality/value** – This research effort focuses, for the first time, on clinical leadership perceptions in public hospital care services. The relationship between internal service quality, learning organization and job satisfaction, can be critical in all efforts attempting to improve clinical departments functionality, thus the results of this survey provide both researchers and public health policy makers with a useful tool for the design and implementation of such efforts.

**Keywords** Internal service quality, Learning organizations, Job satisfaction, Clinical leadership, Service quality assurance, Public health, Greece

**Paper type** Research paper



## 1. Introduction

During the last two decades the concept of internal marketing has focused on defining the profile of employees as internal customers and jobs as internal products that satisfy internal customers' desires and needs (Berry, 1981).

In the health services sector in particular, internal service quality is modeled on the concept that health is a social good and that alone increases demands and expectations for services provided by the system both for citizens and health professionals. Internal procedures affect external customers/patients and internal customers/health professionals. Understanding the needs of internal and external customers is an

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essential condition for developing and implementing a successful health system (Lamprou, 2005).

Thus in the literature globally, the emphasis is on the investigation of factors affecting job satisfaction of health professionals and especially doctors. This is quite understandable since job satisfaction of doctors is directly related to the quality of services provided (Landon *et al.*, 2007). At the same time exploring job satisfaction of doctors in a hospital care context both nationally and internationally becomes more and more important as it is considered to be of fundamental value in redefining existing health systems (Whalley *et al.*, 2006).

Simultaneously, organizations that want to excel in their field must incorporate learning organization procedures which can lead to solving functional problems, improving internal processes and services, innovation in production and service components and especially the ability of converting knowledge to improve competitive advantage (Yang *et al.*, 2004). For the health care sector in particular the ability to learn is essential since in this field knowledge and skills can rapidly become obsolete due to the continuous evolution in science and medicine (Vassalou, 2001).

Under this light health services providers, hospitals in particular, can literally be learning providers, although hospitals face some problems of unique texture, which mainly originate from the specialized involvement of health professionals and the unique relationship between hospitals and local communities (Senge *et al.*, 1994). In a local community level the best place to first attempt to create a learning organization culture would be a typical hospital, because health services providers can integrate their efforts to acquire knowledge on the learning organization approach (Berwick *et al.*, 1990).

The scope of this survey is to investigate the perceptions of clinical leaders' in hospital care services in the context of a Public Health System, on the relationship between job satisfaction, internal service quality and learning organization.

## 2. Conceptual background

The components of internal service quality cannot be defined following traditional functional management principles. However, mapping internal quality dimensions is of particular interest especially regarding their impact on both customer and employee satisfaction.

Even though several authors (Berry and Parasuraman, 1991; Hart and Bogan, 1992) approach internal service quality dimensions from different angles, they share a basic underlying belief that organizations trying to provide quality services to external customers, must start from internal services.

Internal service quality results from the implementation of high quality support services and organizational policies that enable employees to produce results in terms of service quality and customer value (Lings, 2004).

In the context of internal marketing, internal service quality encompasses all those factors that contribute to employee satisfaction, while enhancing and creating customer value (Heskett *et al.*, 1997). At the same time a substantial dipole is created in internal service quality between customer and job satisfaction (Hallowell *et al.*, 1996). The correspondence in this dipole is unequivocal, this way, while job satisfaction can lead to customer satisfaction indirectly, service companies rarely have satisfied customers without satisfied employees.

In various work environments including the health services sector the latest empirical studies conclude to a positive relationship between internal quality and job satisfaction (Panjakajornsak, 2009; Back *et al.*, 2011).

Job satisfaction in healthcare employees affects job quality, effectiveness and efficiency and at the same time the cost of services provided. Besides its importance for patients and the healthcare system overall, job satisfaction in health care is directly linked to implementing an organizational culture in hospital care providers (McManus *et al.*, 2004).

Organizations in today's business environment given the requirements arising from increased competition both nationally and internationally may continue their activities only by exploiting knowledge evolution.

The transformation of enterprises and organizations to learning organizations has been proposed as a key strategy for improving their effectiveness and efficiency. Senge (1990b) designated learning organization as an institution where people continually expand their capacity to create results they truly desire, where new and expansive patterns of thinking are cultivated where collective aspiration is released, and where people are continually learning to see the whole picture in a team spirit. He noted that the dimension that distinguishes learning organizations from more traditional ones is the knowledge of certain principles. There are five principles that are converging in innovative learning organizations: thinking systems, personal knowledge, mental models, creating a shared vision and team learning (Senge, 1990a).

Watkins and Marsick (1993) define a learning organization, as one that is characterized by continuous learning for continuous improvement, and its ability for constant transformation.

Since then, the effect that learning organization procedures have on job satisfaction and thus effectiveness and efficiency, has been addressed extensively by researchers.

Keller *et al.* (1996) reported that a learning organization climate at work has a significant impact on job satisfaction and team productivity especially on participation, cooperation and work importance.

According to Gardiner and Whiting (1997), employee behavioral modifications as a result of the application of learning organization methods in response to external environment challenges have beneficial effects on organizational performance but also improve work performance and employee satisfaction. Later on Mikkelsen *et al.* (2000) found a positive association between organizational learning climate and job satisfaction.

Evaluating the relationship between those three concepts, clinical leadership perceptions are of particular interest since clinical leadership is all about front line effective health care and is considered to be a necessary prerequisite in designing service provision and individualizing patient needs in the health services market (Millward and Bryan, 2005).

Clinical leadership plays a decisive role in improving clinical practice, clinical management decision making processes, as well as decisions involving all clinical patients (Ham, 2003).

Measures and policies aiming to improve safety and clinical treatment efficiency cannot be materialized without the immediate participation of clinical managers both in their original design and their completion (Badrick and Preston, 2000).

### 3. Formulation of hypotheses

#### 3.1 Internal service quality and job satisfaction

The emergence of the concept of internal customer on services marketing and its connection with overall quality, efficiency and effectiveness has led researchers to investigate internal customer satisfaction and created a tendency in the literature to capture the dimensions of internal service quality.

Studies appeared using the work of Parasuraman *et al.* (1988) as a cornerstone introducing the traditional five dimensions (tangibles, credibility, responsiveness, safety and empathy) trying however to adjust them in order to reflect the particular requirements of an internal customer.

Regarding external customers, few reports in the literature agree that a services physical environment plays the most important role in consumer satisfaction (Theodorakis *et al.*, 2001; Alexandris *et al.*, 2004).

In the case of internal customers, this trend becomes more specific, thus a research effort by Brooks *et al.* (1999) investigating internal service quality found that its tangible characteristics are not important to internal customers. Subsequent studies did not even incorporate the tangible characteristics dimension to satisfy internal customers (Gilbert, 2000; Bruhn, 2003).

On this basis we can formulate the first research hypothesis-oriented on health services internal quality which is:

- H1.* The tangible characteristics of hospital care services internal quality do not play an important role in clinical leaders' perceptions.

Several empirical studies have examined the link between employee job satisfaction and internal service quality (Heskett *et al.*, 1997; Loveman, 1998; Pritchard and Silvestro, 2005) noting that this link is a positive one. Ahmed's *et al.* (2003) in an empirical study of organizational components, including this of employee satisfaction, found that the components of internal marketing are predictors of job satisfaction. In different work environments contemporary empirical studies lead to the consolidation of a positive relationship between internal service quality and job satisfaction.

In a study on Australian banks Geralis and Terziovski (2003) found that internal service quality has a positive effect in encouraging workers to take initiatives and this has resulted in increased job satisfaction. Pritchard and Silvestro (2005) in a research on 75 household products retail stores in the UK to investigate the relationship between employee beliefs their performance, client perceptions and financial performance, confirmed the relationship between internal service quality and job satisfaction. Similar results are presented in a research on six multinational e-commerce companies (Jung-Yu and Chun-Yi, 2008) in a survey in the health sector (Panjakajornsak, 2009) and in a research on 358 casino employees in Korea (Back *et al.*, 2011) that showed that internal service quality has a positive effect on job satisfaction while strengthening employee effectiveness.

Internal service quality and health care services, is an extremely complex construct. Investigating the perceptions of the participants in this research of the internal service quality interactive characteristics and capturing their impact on job satisfaction is a step in assessing the human factor in health services sector and therefore the second research hypothesis is:

*H2.* In hospital care service, clinical leaders' perceptions of internal service quality interactive characteristics have a positive impact on their job satisfaction.

### *3.2 Learning organization and job satisfaction*

Success is an incentive for individuals and on an organizational level important is "to know how to act", which leads to organizational success (Aydin and Ceylan, 2008). From this point-of-view, productivity growth in knowledge affects organizational success and therefore satisfaction.

Focusing their attention on individual dimensions of a learning organization many researchers have attempted to link them with job satisfaction. Thus teamwork, organizational culture of innovation, entrepreneurship and flexibility, organizational learning ability have a positive effect on job satisfaction (Griffin *et al.*, 2001; Lund, 2003; Rowden and Conine, 2003; Chiva and Alegre, 2008).

Hong (2001) supports that an effective function of learning in a learning organization can enhance employee skills impact positively their fellowship while strengthening their moral attitude to operational needs and reducing potential problems from workplace alternations.

Egan *et al.* (2004) found that employee's predisposition to leave an organization is negatively affected if organizational learning processes are implemented in their work place a fact that proves its impact on their job satisfaction. Creating appropriate mechanisms to disseminate and increase knowledge in organizations will help employee satisfaction (Singh and Sharma, 2008) and the diffusion of knowledge will contribute to employee confidence which is directly linked to satisfaction.

In health care environment the ability to learn is essential as in this context knowledge and skills can rapidly become obsolete due to the continuous evolution in science and medicine. This is crucial for both employee satisfaction and overall quality of health care itself. As mentioned when we started to explore this relationship the transformation of enterprises and organizations to learning organizations has been proposed as a key strategy for improving their effectiveness and efficiency. While this principle has been applied extensively in the corporate environment it is a relatively new concept in health systems.

Therefore the third research hypothesis is:

*H3.* Learning organization dimensions in hospital care services have a positive impact on clinical leaders' job satisfaction.

## **4. Methodology**

The survey was conducted in 15 hospitals in 11 cities in Greece. Questionnaires were sent to 153 doctors – heads of clinical departments of basic medical specialties 123 answered. Table I contains data on medical specialties, prior professional experience and demographics of the respondents. The questionnaires were collected via post from 1 September 2007 to 30 November 2007 in collaboration with hospital administrations.

The choice of investigating the perceptions of clinical department leadership resulted from its dual role both in medical care provision as well as in a set of procedures and functions relating to organizational and financial management issues.

Based on the concept that techniques and methods for measuring internal service quality used for external customers can be applied to internal customers (Bowers *et al.*,

	%	The impact of service quality
<i>Demographics</i>		
<i>Gender</i>		
Male	82.9	
Female	17.1	
<i>Age</i>		
36-45	4.1	
46-55	31.7	
56-65	64.2	
<i>Experience</i>		
<i>Years in your current position (department head)</i>		
1-5	39.8	
6-10	36.6	
11-20	22	
> 21	1.6	
<i>Have you served in a similar position in another hospital?</i>		
Yes	22	
No	78	
<i>Years as a department head in another hospital</i>		
1-5	70.4	
6-10	25.9	
<i>Specialty per section</i>		
<i>Internal pathology section</i>		
Pathologists	15	
Cardiologists	16	
Pneumologists	4	
Pediatricians	13	
<i>Surgical section</i>		
General Surgeons	22	
Orthopedic	14	
Ophthalmologists	4	
Otorinolaryngologists	8	
Urologists	12	
Gynecologists	15	

**Table I.**  
Demographics, previous  
experience and specialty  
data

1990; Gremler *et al.*, 1994) many researchers focused their efforts on modifying SERVQUAL instrument for the internal business environment (Cotter, 1993; Boshoff and Mels, 1995). The SERVQUAL instrument can be successfully used to investigate internal service quality (Reynoso and Moores, 1995; Kang *et al.*, 2002). The present study used this instrument and based on Young and Varble (1997) approach the 22 questions of the instrument were verbally modified. The respondents were called to give their answers in a form of statements with a seven-point Likert scale (strongly disagree-I totally agree).

Saane *et al.* (2003) in an analysis of 29 psychometric tools measuring job satisfaction of hospital employees have concluded that only seven of them meet the quality standards for reliability and validity. Among these, "job satisfaction survey" (JSS)

instrument is characterized as a multidimensional tool according to Spector (1985), and although it can be used in most fields primarily it has been developed exclusively for the public sector, specifically for social services and nonprofit organizations. For this reason it has been used in surveys to measure job satisfaction of doctors (Aasland *et al.*, 2010).

This survey employed this tool for the investigation of job satisfaction using ten questions answered with a seven point Likert scale (extremely dissatisfied-extremely satisfied) based on the research of Nylenna *et al.* (2005) in a sample of 509 hospital doctors.

Investigating the dimensions of a learning organization in the literature the "Dimension of Learning Organization Questionnaire (DLOQ)" instrument of Watkins and Marsick (2003) with appropriate modifications appears to be most commonly used in health sector surveys (Bridges *et al.*, 2007; Vermaak *et al.*, 2009; Watkins *et al.*, 2009). Based on these findings, the complexity of this investigation and the special relationship between the nature of the medical profession with the procedures of continuous learning and training, to investigate learning procedures in hospitals the tool DLOQ has been used. The original design consisted of 15 questions-proposals oriented to the organizational level of promoting organizational learning procedures in the hospital under investigation.

The section of the questionnaire was assessed as all the other units and after the final control and changes 12 questions-proposals remained to be evaluated with a high degree of reliability in testing. The results were processed with the use of SPSS17 statistical package.

## 5. Results

Processing demographics revealed that the majority of the participants in our sample are male, 83 percent of the sample under investigation. 64.2 percent of the respondents are between 56 and 65 years of age, while 31.7 percent are between 46 and 55. Regarding prior experience of the participants in responsibility positions, 76.4 percent have not exceeded ten years in a managerial position while 23.6 percent have performed managerial duties for over ten years. Only 22 percent of the respondents held a managerial position in another hospital (Table I).

The reliability of job satisfaction questionnaire was examined with the use of Cronbach's Alpha coefficient which after deducting four variables using the method of "Alpha if item removed" was identified as high (0.885) thus demonstrating a very good gradation for the measuring instrument (Nunnally, 1978). Regarding the unity of questions investigating internal service quality after processing data using principal component analysis (PCA) the necessity of removing two variables due to common loading (multi-factor) was noted on both the two factors identified together in order to improve analysis clarity (Hair *et al.*, 2005). The Cronbach's Alpha coefficient for the 20 questions was estimated to be too high (0.960). For the 12 questions of the learning organization unity Cronbach's Alpha coefficient was calculated also very high (0.934).

The application of exploratory factor analysis (by the method of principal component analysis) found that Kaiser-Meyer-Olkin (K-M-O) coefficient for internal service quality data is 0.945, for job satisfaction 0.915 and 0.917 for learning organization. According to Hutcheson and Sofroniou (1996), coefficients over 0.9 give almost perfect results. At the same time the methodology revealed a structure of two factors which explain 75.94 percent



of the total variance regarding internal service quality. This confirms the existence of two internal service quality dimensions namely its interactive and tangible characteristics. The sole factor of job satisfaction was extracted and it explains 70.8 percent of the total variance. Regarding learning organization two factors were revealed empowerment and continuous learning, explaining 72.63 percent of the total variance. The relevant factors loading are presented in Table II.

Taking into consideration the factors extracted from the exploratory factor analysis we proceeded with the application of Multiple Regression Analysis. The factor score of job satisfaction was selected as a dependent variable while the remaining four factor scores extracted were used as independent variables.

The implementation of this multiple regression model (model 1), including all four independent variables, revealed that the variable of internal quality tangible characteristics factor has a value of  $t = 1.369$ , within the interval  $[-2.2]$  and significant at  $p = 0.174 > 0.05$  (Table III). This finding confirms the first research hypothesis that the physical characteristics of internal service quality do not play an important role in the perceptions of clinical leadership. As a result, this dimension was excluded from the final model (model 2) of the multiple regression function definition.

The results of the application of the proposed model are presented in Tables III to V.

According to these results, the determination coefficient for the regression model ( $R^2$ ) had a value of 0.56, while the adjusted determination coefficient (Adjusted  $R^2$ ) had a value of 0.55. Hence, the proposed model explains 55 percent of the total variance of the dependent variable of job satisfaction. This measure is considered to be satisfactory.

The model is well adjusted regarding the available data since  $F = 50.665$  and significant at  $p = 0.000 < 0.05$  while the value of Durbin-Watson coefficient estimated at 2.4 is inside the interval  $[1.5, 2.5]$ . This estimated value is an indication of residuals independence.

The values of the variation inflation factor (VIF) coefficient are below 2, while the values of the Tolerance coefficient are above 0.1. These are indications of the absence of multicollinearity problems.

The residuals normality test was conducted with the use of a normality histogram (Figure 1). The results indicate a satisfactory normality with the exception of minor discrepancies. Regarding residuals scattering, the corresponding scatterplot (Figure 2) reveals that the residuals homoscedasticity is met since all residuals values, with minor exceptions, are in the interval of  $[-2, 2]$  and uniformly spread in the width of standardized predicted values of job satisfaction average.

In Table III the estimated values of multiple linear regression coefficients are presented and the model variables are defined. Interactive internal service quality characteristics, empowerment and continuous learning dimensions are statistically significant for the proposed model ( $p$ -values  $< 0.05$ ) which is:

$$\text{JobSatisfaction} = -0.29 + 0.442^*X_1 + 0.222^*X_2 + 0.182^*X_3$$

Where:

- $X_1$  = Internal service quality interactive characteristics.
- $X_2$  = Learning organization empowerment dimension.
- $X_3$  = Learning organization continuous learning dimension.

LHS 26,1		Interactive	Tangible	Empowerment	Cont. learning	Job satisfaction
	<i>Internal quality</i>					
	I feel safe in any cooperation with the hospital administration	0.946				
42	Hospital administration is always available to serve me in any problem I face	0.932				
	I have every confidence in the behavior of hospital administration	0.931				
	Hospital administration spends the time required to serve me	0.927				
	Hospital administration always shows a personal interest in me	0.909				
	Hospital administration is always capable to address my requests	0.902				
	Hospital administration always serves me at the time promised	0.901				
	Hospital administration is always interested in my department's best interest	0.896				
	If a problem arises in my department Hospital administration shows a sincere interest in solving it	0.871				
	Hospital administration tries hard to avoid mistakes	0.861				
	Hospital administration always provides reliable services	0.856				
	Hospital administration understands separately each department's specificities	0.839				
	Hospital administration is always polite and friendly with me	0.835				
	Hospital administration communicates with me in a polite manner	0.822				
	Hospital administration offers services as promised	0.792				
	Hospital administration is nevertoo busy to address any problem I face	0.779				
	Hospital administration always informs me about new services available for the public	0.72				
	My department disposes modern and contemporary equipment to meet up to date needs		0.869			
	Department facilities' aesthetics are good		0.863			
	The equipment in my department (bio-medical technology equipment) is adequately advanced		0.784			

**Table II.**  
Component matrix

(continued)

	Interactive	Tangible	Empowerment	Cont. learning	Job satisfaction	The impact of service quality	
<i>Learning organization</i>							
My hospital disposes structural and administrative flexibility to meet employee choices in their duties			0.866			<b>43</b>	
My hospital empowers employees in taking initiatives in performing their duties			0.864				
My hospital adopts procedures to include employees in materializing organizational visions			0.855				
My hospital supports the diffusion and alignment of organizational visions in various organizational levels and scientific groups			0.76				
The system for evaluating and rewarding job performance helps hospital employees to work efficiently			0.737				
Employees have a controlling power over resources available to complete their tasks			0.692				
My hospital supports employees in taking calculated risks regarding their duties			0.606				
My hospital prepares employees to identify and develop necessary skills to fulfill future duties				0.817			
In my hospital the necessary resources are disposed for employee education and training				0.81			
My hospital thinks of the improvement in employee knowledge as an investment and not a cost				0.795			
My hospital rewards employees who promote learning advancement through actions undertaken				0.741			
My hospital enhances employee communication to promote knowledge diffusion				0.732			
<i>Job satisfaction</i>							
With potentials and opportunities for skills and competence advancement					0.828		
With recognition regarding work contribution					0.778		
With physical work conditions					0.71		
Overall with my practice					0.656		
With my benefits					0.652		
With my relationships with my colleagues and other hospital employees					0.63		

Table II.

Model	Unstandardized coefficients		Standardized coefficients		Collinearity statistics			
	B	Std. error	Beta	<i>t</i>	Sig.	Tolerance	VIF	
1 (Constant)	-0.030	0.054		-0.551	0.583			
Empowerment	0.178	0.067	0.195	2.656	0.009	0.679	1.473	
Continuous learning	0.168	0.072	0.181	2.347	0.021	0.618	1.618	
Interactive	0.461	0.072	0.524	6.428	0.000	0.552	1.811	
Physical	0.094	0.069	0.095	1.369	0.174	0.759	1.317	
2 (Constant)	-0.029	0.055		-0.534	0.594			
Empowerment	0.222	0.059	0.244	3.781	0.000	0.887	1.127	
Continuous learning	0.182	0.071	0.195	2.552	0.012	0.630	1.587	
Interactive	0.442	0.071	0.502	6.259	0.000	0.574	1.744	

**Table III.**  
Models coefficients

**Note:** Dependent variable: job satisfaction

Model	<i>R</i>	<i>R</i> square	Adjusted <i>R</i> square	Std error of the estimate	Durbin-Watson
2	0.749*	0.561	0.550	0.604	2.436

**Table IV.**  
Model summary

**Notes:** \*Predictors: (constant), empowerment, continuous learning, interactive; Dependent variable: job satisfaction

Model		Sum of squares	df	Mean square	<i>F</i>	Sig.
2	Regression	55.442	3	18.481	50.665	0.000*
	Residual	43.407	119	0.365		
	Total	98.849	122			

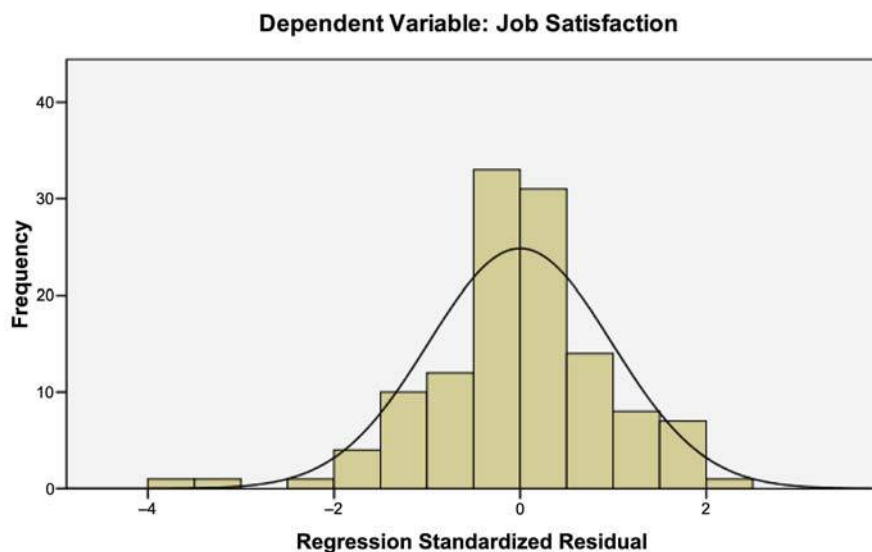
**Table V.**  
ANOVA

**Notes:** \*Predictors: (constant), empowerment, continuous learning, interactive; Dependent variable: job satisfaction

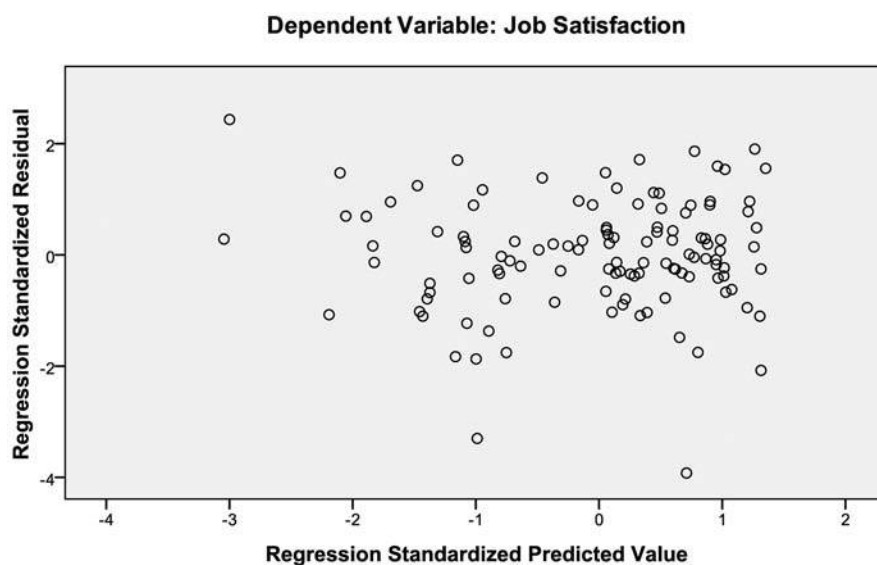
In case that internal service quality interactive characteristics values increase by one unit then job satisfaction value will increase by 0.441. In case that the empowerment dimension value increases by one unit then job satisfaction value will increase by 0.222, while a corresponding increase in continuous learning value will lead to a 0.182 increase in job satisfaction. In the function above, it is evident that all three variables have a positive contribution to job satisfaction (positive signs). Based on these results both the second and the third research hypotheses are confirmed.

## 6. Discussion

This research study attempts to incorporate the impact of internal service quality characteristics and learning organization dimensions on clinical leadership job satisfaction. Clinical departments are considered to be front line entrepreneurial units in the optimal function of the Health Sector.



**Figure 1.**  
Histogram on residuals  
with superimposed normal  
curve



**Figure 2.**  
Scatterplot of residuals  
and predicted values

Mapping internal service quality dimensions of a learning organization is of particular interest especially regarding their impact on job satisfaction. In different working environments, including health services sector the latest empirical studies lead to a positive relationship between internal service quality and job satisfaction as well as learning organization and job satisfaction.

Our findings revealed that internal service quality physical characteristics are not important in clinical leaders' perceptions in hospital care services. The proposed model confirmed a positive impact of internal service quality interactive characteristics, empowerment and continuous learning as learning organization dimensions on clinical leader's job satisfaction.

These findings are of particular importance for health policy makers and hospital managers in designing and adopting practices and policies, to improve hospital care services internal service quality, strengthen and implement learning organization procedures since job satisfaction is strongly affected by these factors and plays a key role in service efficiency.

### 7. Future research

Evaluating the impact of internal service quality and learning organization on job satisfaction in health care services would be more integrated and comprehensive if future research could incorporate the impact of variables such as age, gender, experience and clinical specialty of clinical leaders. Furthermore future research could include the perceptions of all personnel scientific categories. Thus the application of the proposed model to all clinical department doctors as well as nursing and administrative staff could lead to a safer estimate. Direction for future research could also be a comparison of results between the public and private health care sector.

### References

- Aasland, O., Rosita, J. and Nylenna, M. (2010), "Health care reforms and job satisfaction among doctors in Norway", *Scandinavian Journal of Public Health*, Vol. 38 No. 3, pp. 252-8.
- Ahmed, K., Rafiq, M. and Saad, M. (2003), "Internal marketing and the mediating role of organizational competencies", *European Journal of Marketing*, Vol. 37 No. 9, pp. 1221-41.
- Alexandris, K., Zahariadis, P., Tsorbatzoudis, C. and Groudios, G. (2004), "An empirical investigation of the relationships among service quality, customer satisfaction and psychological commitment in a health club context", *European Sport Management Quarterly*, Vol. 4 No. 1, pp. 36-52.
- Aydin, B. and Ceylan, A. (2008), "The employee satisfaction in metalworking manufacturing: how do organizational culture and organizational learning capacity jointly affect it?", *Journal of Industrial Engineering and Management*, Vol. 1 No. 2, pp. 143-68.
- Back, K., Ki Lee, C. and Abbott, J. (2011), "Internal relationship marketing: Korean casino employees' job satisfaction and organizational commitment", *Cornell Hospitality Quarterly*, Vol. 51 No. 4, pp. 111-24.
- Badrick, T. and Preston, A. (2000), "Influences on the implementation of TQM in health care organizations: professional bureaucracies, ownership and complexity", *Australian Health Review*, Vol. 24 No. 1, pp. 166-75.
- Berry, L.L. (1981), "The employee as customer", *Journal of Retail Banking*, Vol. 3 No. 1, pp. 25-8.
- Berry, L.L. and Parasuraman, A. (1991), *Marketing Services: Competing through Quality*, The Free Press, New York, NY.
- Berwick, D., Godfrey, B. and Roesner, J. (1990), *Curing Healthcare: New Strategies for Quality Improvement*, Jossey Bass, San Francisco, CA.
- Boshoff, C. and Mels, G. (1995), "A causal model to evaluate the relationships among supervision, role stress, organizational commitment and internal service quality", *European Journal of Marketing*, Vol. 29 No. 2, pp. 23-42.
- Bowers, K.S., Regehr, G., Balthazard, C.G. and Parker, K. (1990), "Intuition in the context of discovery", *Cognitive Psychology*, Vol. 22 No. 1, pp. 72-110.

- Bridges, P.H., Bierema, L.L. and Valentine, T. (2007), "The propensity to adopt evidence-based practice among physical therapists", *BMC Health Services Research*, Vol. 7, p. 103, available at: [www.ncbi.nlm.nih.gov/pmc/articles/PMC1929067/?tool=pubmed](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1929067/?tool=pubmed)
- Brooks, F., Lings, N. and Botschen, A. (1999), "Internal marketing and customer driven wave fronts", *The Service Industries Journal*, Vol. 19 No. 4, pp. 49-67.
- Bruhn, M. (2003), "Internal service barometers: conceptualization and empirical results of a pilot study in Switzerland", *European Journal of Marketing*, Vol. 37 No. 9, pp. 1187-204.
- Chiva, R. and Alegre, J. (2008), "Emotional intelligence and job satisfaction: the role of organizational learning capability", *Personnel Review*, Vol. 37 No. 6, pp. 681-701.
- Cotter, R.S. (1993), *Exploratory Study in Delivering Quality Service in an Internal Market Large Service Organization*, UMI Dissertation Services, Mississippi State University, Starkville, MS.
- Egan, T.M., Yang, B. and Bartlett, K.R. (2004), "The effects of organizational learning culture and job satisfaction on motivation to transfer learning and turnover intention", *Human Resource Development Quarterly*, Vol. 15 No. 3, pp. 279-301.
- Gardiner, P. and Whiting, P. (1997), "Success factors in learning organizations: an empirical study", *Industrial & Commercial Training*, Vol. 29 No. 2, pp. 41-8.
- Geralis, M. and Terziovski, M. (2003), "A quantitative analysis of the relationship between empowerment practices and service quality outcomes", *Total Quality Management*, Vol. 14 No. 1, pp. 45-62.
- Gilbert, G.R. (2000), "Measuring internal customer satisfaction", *Managing Service Quality*, Vol. 10 No. 3, pp. 178-86.
- Gremler, D., Bitner, M. and Evans, K. (1994), "The internal service encounter", *International Journal of Service Industry Management*, Vol. 5 No. 2, pp. 34-56.
- Griffin, M.A., Patterson, M.G. and West, M.A. (2001), "Job satisfaction and teamwork: the role of supervisor support", *Journal of Organizational Behavior*, Vol. 22 No. 5, pp. 537-50.
- Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C. (2005), *Multivariate Data Analysis*, 6th ed., Macmillan, New York, NY.
- Hallowell, R., Schlesinger, L.A. and Zornitsky, J. (1996), "Internal service quality, customer and job satisfaction: linkages and implications for management", *Human Resource Planning*, Vol. 19 No. 2, pp. 20-31.
- Ham, C. (2003), "Improving the performance of health services: the role of clinical leadership", *The Lancet*, March 25, available at: <http://image.thelancet.com>
- Hart, C.W.L. and Bogan, C.E. (1992), *The Baldrige*, McGraw-Hill, New York, NY.
- Heskett, J.L., Sasser, W.E. Jr and Schlesinger, L.A. (1997), *The Service Profit Chain: How Leading Companies Link Profit and Growth to Loyalty, Satisfaction and Value*, Free Press, New York, NY.
- Hong, J.C. (2001), *Knowledge Innovation and Organization Learning*, Wu-Nan Publication Company, Taipei.
- Hutcheson, G. and Sofroniou, N. (1996), *The Multivariate Social Scientist: Introductory Statistics Using Generalized Linear Models*, Sage, London.
- Jung-Yu, L. and Chun-Yi, C. (2008), "A strategic approach of internal service quality for improving employees' job satisfaction in e-business", SIGMIS CPR Conference on Computer Personnel Doctoral Consortium and Research, ACM, New York, NY.
- Kang, G.D., James, J. and Alexandris, K. (2002), "Measurement of internal service quality: application of the Servqual battery to internal service quality", *Managing Service Quality*, Vol. 12 No. 5, pp. 278-91.
- Keller, R.T., Julian, S.D. and Kedia, B.L. (1996), "A multinational study of work climate, job satisfaction, and the productivity of R&D teams", *IEEE Transactions on Engineering Management*, Vol. 42 No. 1, pp. 48-55.

- Lamprou (2005), *Emergency Departments. Organization and Operation*, Mediforce Services SA, Athens.
- Landon, B.E., Reschovsky, J. and Blumenthal, D. (2007), "Changes in career satisfaction among primary care and specialist physicians, 1997-2001", *JAMA*, Vol. 289 No. 4, pp. 442-9.
- Lings, I.N. (2004), "Internal market orientation: construct and consequences", *Journal of Business Research*, Vol. 57 No. 4, pp. 405-13.
- Loveman, G. (1998), "Employee satisfaction, customer loyalty, and financial performance: an empirical examination of the service profit chain in retail banking", *Journal of Service Research*, Vol. 1 No. 1, pp. 18-31.
- Lund, D.B. (2003), "Organizational culture and job satisfaction", *Journal of Business & Industrial Marketing*, Vol. 18 No. 3, pp. 219-36.
- McManus, I.C., Keeling, A. and Paice, E. (2004), "Stress burnout and doctors' attitudes to work are determined by personality and learning style: a twelve year longitudinal study of UK medical graduates", *BMC Medicine*, Vol. 2, pp. 29-32.
- Mikkelsen, A., Ogaard, T. and Lovrich, N. (2000), "Modeling the effects of organizational setting and individual coping style on employees' subjective health, job satisfaction and commitment", *Public Administration Quarterly*, Vol. 24 No. 3, pp. 371-97.
- Millward, J. and Bryan, K. (2005), "Clinical leadership in health care: a position statement", *Leadership in Health Services*, Vol. 18 No. 2, pp. 13-25.
- Nunnally, J.C. (1978), *Psychometric Theory*, McGraw-Hill Book Company, New York, NY.
- Nylenna, M., Gulbrandsen, P., Forde, R. and Aasland, O. (2005), "Unhappy doctors? A longitudinal study of life and job satisfaction among Norwegian doctors 1994-2002", *BMC Health Services Research*, Vol. 5 No. 44, pp. 1-6.
- Panjakajornsak, V. (2009), "Applying the service profit chain to a private hospital in Thailand", *NIDA Development Journal*, Vol. 49 No. 2, pp. 81-107.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), "SERVQUAL: a multi-item scale for measuring consumer perceptions of the service quality", *Journal of Retailing*, Vol. 64 No. 1, pp. 420-50.
- Pritchard, M. and Silvestro, R. (2005), "Applying the service profit chain to analyse retail performance: the case of the managerial strait-jacket?", *International Journal of Service Industry Management*, Vol. 16 No. 3, pp. 337-56.
- Reynoso, J. and Moores, B. (1995), "Towards the measurement of internal quality service", *International Journal of Service Industry Management*, Vol. 6 No. 3, pp. 64-83.
- Rowden, R.W. and Conine, C.T. Jr (2003), "The relationship between workplace learning and job satisfaction in US small commercial banks", in Lynham, S.A. and Egan, T.M. (Eds), *AHRD 2003 Conference Proceedings*, Vol. 1, pp. 459-66.
- Saane, N., Sluiter, J.K., Verbeek, J.H.A.M. and Frings-Dresen, M.H.W. (2003), "Reliability and validity of instruments measuring job satisfaction – a systematic review", *Occupational Medicine*, Vol. 53 No. 3, pp. 191-200.
- Senge, P.M. (1990a), *The Fifth Discipline: The Art and Practice of the Learning Organization*, Doubleday Currency, New York, NY.
- Senge, P.M. (1990b), "The leader's new work: building learning organizations", *Sloan Management Review*, Vol. 32 No. 1, pp. 7-23.
- Senge, P., Kleiner, A., Roberts, C., Ross, R. and Smith, B. (1994), *The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization*, Doubleday, New York, NY.
- Singh, A.K. and Sharma, V. (2008), "Knowledge management and employee satisfaction: a comparative study on Indian telecom and software sector", paper presented at the Eight International Conference on Knowledge, Culture and Change in Organizations, Cambridge University, Cambridge, 5-8 August 2008.



- Spector, P.E. (1985), "Measurement of human service staff satisfaction: development of the job satisfaction survey", *American Journal of Community Psychology*, Vol. 13 No. 6, pp. 693-713.
- Theodorakis, N., Kambitsis, C. and Laios, A. (2001), "Relationship between measures of service quality and satisfaction of spectators in professional sports", *Managing Service Quality*, Vol. 11 No. 6, pp. 431-8.
- Vassalou, L. (2001), "The learning organization in health-care services: theory and practice", *Journal of European Industrial Training*, Vol. 25 No. 7, pp. 354-65.
- Vermaak, K.P., Reld, S.J. and Horwood, C.M. (2009), "Factor impacting on organizational learning in three rule health districts", *South African Family Practice*, Vol. 51 No. 2, pp. 138-42.
- Watkins, K.E. and Marsick, V.J. (1993), *Sculpting the Learning Organization: Lessons in the Art and Science of System Change*, Jossey-Bass, San Francisco, CA.
- Watkins, K.E. and Marsick, V.J. (Eds) (2003), "Make learning count! Diagnosing the learning culture in organizations", *Advances in Developing Human Resources*, Vol. 5 No. 2, pp. 182-95.
- Watkins, K.E., Milton, J. and Kurz, D. (2009), "Diagnosing the learning culture in public health agencies", *International Journal of Continuing Education and Lifelong Learning*, Vol. 2 No. 1, pp. 65-81.
- Whalley, D., Bojke, C., Gravelle, H. and Sibbald, B. (2006), "GP job satisfaction in view of contract reform: a national survey", *British Journal of General Practice*, Vol. 56 No. 523, pp. 87-92.
- Yang, B., Watkins, K.E. and Marsick, V.J. (2004), "The construct of the learning organization: dimensions, measurement and validation", *Human Resource Development Quarterly*, Vol. 15 No. 1, pp. 31-55.
- Young, J.A. and Varble, D.L. (1997), "Purchasing's performance as seen by its internal customers: a study in a service organization", *International Journal of Purchasing and Materials Management*, Vol. 33 No. 3, pp. 36-41.

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