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**The EFQM Excellence Model:  
An Exploratory Attempt  
for Assessing the Hellenic National Sport Federations**

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*International Journal of Sport Management Recreation & Tourism*, Vol.14, p.38-67, 2014

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**To link to this article: <http://dx.doi.org/>**

**DOI: 10.5199/ijsmart-1791-874X-14c**

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**Abstract**

The EFQM Excellence Model is an advanced tool for organizations' improvement, which is based on the principles of the theoretical frame of Total Quality Management (Michalska, 2008). The aim of this study was a first attempt to assess the Hellenic National Sport Federations' (HNSFs) organizational-managerial operations and the investigation of their readiness degree for the application of Management Excellence's processes, according to European Foundation of Quality Management (EFQM) Excellence Model. An adaptive questionnaire, which was developed according to the managerial and functional environment of the HNSFs, was used to reflect the perception of people serving at the HNSFs about the application of quality management's and management excellence's practices.

One hundred respondents from 18 HNSFs participated in this study. According to the results, processes of management's excellence do exist and are indeed applied, but neither often, nor systematically. Moreover, there is a differentiation in perceptions between the three hierarchical administrative groups. It is concluded that in this particular moment a management excellence program may prove difficult to be applied in the HNSFs, unless there is common perception and agreement between the parties involved, on: a) the meaning of management's excellence and b) the profits it may produce for the sport organization.

**Keywords:** Total Quality Management; EFQM Excellence Model; self assessment; Hellenic National Sport Federations

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**Introduction**

Internationally quality is perceived as synonymous to high level expectations for the functionality of a service or product. As it was first identified by Shewhart (1931), quality is how good a product is. In this sense, according to Garvin (1988), the quality is quite recognizable and universal; it is a point which consists of non-negotiable boundaries and high performance. Hence, although it cannot be defined exactly, it is perceived wherever it exists.

Crosby (1979), offered his interpretation for quality, which includes the following principles: a) quality has to do with adapting to the requirements, b) the problems should be determined by those who cause them and, therefore, quality is inexpensive, c) costs arise when a work is not executed in the right way from the beginning and d) the ultimate goal of quality is zero defective products / services. Parasuraman, Zeithaml & Berry (1988), have defined service quality as the ability of the organization to meet or exceed customer expectations.

In the past few years quality has been established as the basic criterion of consuming and enterprising behaviour (Tsiotras, 2002). Increasingly, European organizations are accepting the fact that quality management constitutes an excellent way to manage their activities, in order to improve their efficiency, effectiveness and competitiveness. At the same time, quality management ensures conditions for long-term success and satisfaction of the needs of their customers, employees, economic partners, shareholders and the community in general.

Regarding sports, Smith & Stewart (1999: 62) argue that: '... products and services that emanate from the commercial sector in general and from governmental work are provided in the highest levels of quality. The adoption of quality management practices by the majority of the community demonstrates even more that sport services are often below base level.' They also support that if sport organizations do not adopt the doctrine of quality management and do not apply its tools, then their development will not be satisfactory.

### ***Hellenic National Sport Federations***

HNSFs, according to Papadimitriou & Taylor (2000) as members of their respective international federation (IF), have been formed to fulfill two objectives: (1) to promote a particular sport within the nation, and (2) to advance national sport teams in international competitions. Although, previous researchers have commented on the conflicting nature of the two particular objectives (Chelladurai, 1985; Chelladurai & Haggerty, 1991) the Greek government (represented by the General Secretariat of Sports) seems to give greater rewards to those sports organizations which aim to ensure that talented Greek athletes are supported and motivated by high standards of technical and administrative assistance in order to improve the nation's competitive level in international competition. HNSFs are controlled and managed by powerful boards of directors and most of their financial resources are generated from the General Secretariat of Sports (GSS), the Greek government agency which supervises them and is responsible for sports policies and legislation.

Acknowledging the value and usefulness of quality management, the aim of the study was to make a first attempt in the assessment of the HNSFs organizational-managerial operations and to investigate their readiness' degree for the application of Managerial Excellence's processes, according to EFQM Excellence Model. The adoption of a quality management framework by the HNSFs would ensure more effective management, more efficient function and a superior level of services. It should be noted that despite the importance of the subject, very few relevant researches have been made in sport's sector. Also while in other areas quality has been established as a top priority issue for their operation in the field of sport it has travelled a short distance in order to reach that level. Accordingly, the need for the depiction of sport institutions' organisational – managerial profile, conforming to a frame of quality management and excellence, is quite crucial, as the results deriving from the research can determine the organisational – managerial level of HNSFs according to TQM. This determination could also be a start for changes and improvement, especially at this time, in the middle of economic crisis.

### ***Literature Review***

#### ***TQM Framework***

The new concept of quality, TQM, is based on different criteria related to management improvement and organization results (Gene'-Badia, Jodar-Sola',

Peguero–Rodríguez, Contel– Segura & Moliner–Molins, 2001). TQM is a management philosophy that seeks to integrate all organizational functions to focus on meeting customer needs and organizational objectives (Hashmi, 2000; 2004). It is thus a multi-faceted approach to creating organizational change, with factors including quality, customers, employees, organizational production, and the role of senior management (Hackman & Wageman, 1995). According to Robinson, (2004: 138) "... TQM is a framework for quality management that aims to develop an organizational culture that sets quality as one of its objectives". TQM focuses on employee involvement in the control of quality in organizations (Levy, 2003). Rather than concentrating on the volume of production, TQM focuses on quality, customer demands and expectations (Landy & Conte, 2004).

A number of studies and researches have underlined that emphasis in TQM strengthens participation, improves the quality of provided products and services, leads to high productivity, increases the customers' satisfaction and market's shares and leads to increased profitability. The fact that similar researches show strengthening of the organization's total economic output is also characteristic (Evans & Lindsay, 2008). There are three main TQM models: a) the Deming Price Model, which is used only in Japan and has an orientation toward production issues, b) the Malcom Baldrige Model, which is widely used in USA. It is focused on client satisfaction but is based excessively on a competitive a market environment, c) the EFQM Excellence Model, which is a practical tool to help organizations by measuring where they are on the path to excellence, helping them to understand the gaps, stimulating solutions and monitoring progress continuously. It emphasizes on the idea of self - assessment and the identification of strengths and weaknesses via criteria guidelines. (Gene - Badia et al.2001).

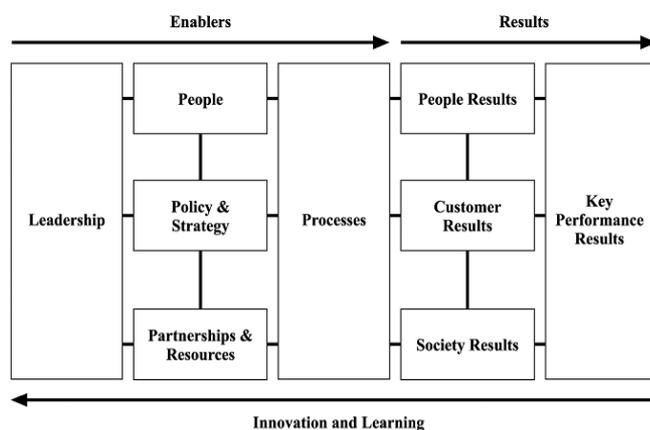
The Deming Prize, the European Quality Award and the Malcolm Baldrige NQA have played a major role in the quality revolution in Japan, Western Europe and USA (Lobo, Matawie & Samaranayake, 2012). Generally, excellence models have proven useful in organizations of varying size and type, across a variety of cultures and languages (Sila & Ebrahimpour, 2003) and in sectors as diverse as manufacturing, education, health and the arts (Goldschmidt & Goldschmidt 2001; Vallejo, Saura, Sunol, Kazandjian, Ureña, Mauri, 2006; Zink & Schmidt 1995).

*The EFQM Excellence Model*

The EFQM Excellence Model was instituted in 1992 in order to promote Total Quality Management in Europe (EFQM, 1999). It is an advanced tool for organizations' improvement, which is based on the principles of the TQM theoretical frame (Michalska, 2008). The EFQM Excellence Model, which was developed by the EFQM organization, was presented as an assessment framework for organizations for the European Quality Award and constitutes the most widespread tool in Europe (Eskildsen & Dahlgaard, 2000). As a framework for organizational self-assessment, it has spread into many companies in Europe making it the most popular tool for self-assessment in the continent (Hakes, 1997) and probably the most internationally used framework (Black, Meredith & Groomebridge, 2011). Many researchers such as Dahlgaard-Park (2008), Dahlgaard-Park and Dahlgaard (2006) and Bergquist, Fredriksson, and Svensson (2005) have considered Excellence Model as a systematic mechanism to improve organisational performance.

The EFQM Excellence Model is very adaptable and its comprehensiveness allows it to be used at different levels within organizations to different degrees of detail ("Using the EFQM Excellence Model", n.d.) and allows for enough flexibility to be adapted to any type of organisation, regardless of size or sector (EFQM, 2003). It consists of nine criteria (figure 1) and reflects the following eight fundamental concepts (EFQM, 2003):

1. Results Orientation
2. Customer Focus
3. Leadership & Constancy of Purpose
4. Management by Processes & Facts
5. Development & Involvement
6. Continuous Learning, Innovation & Improvement
7. Partnership Development
8. Public Responsibility

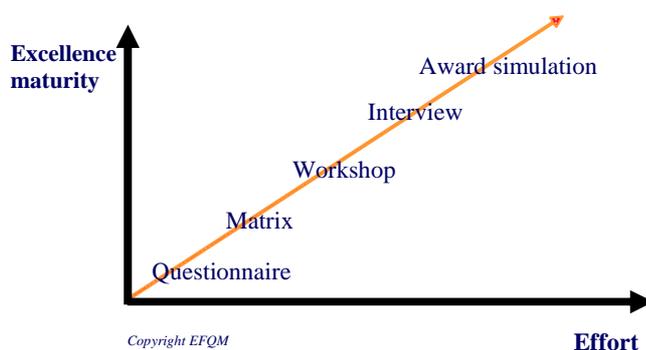


Note: Copyright 1999-2003 EFQM

**Figure 1.** The EFQM Excellence Model.

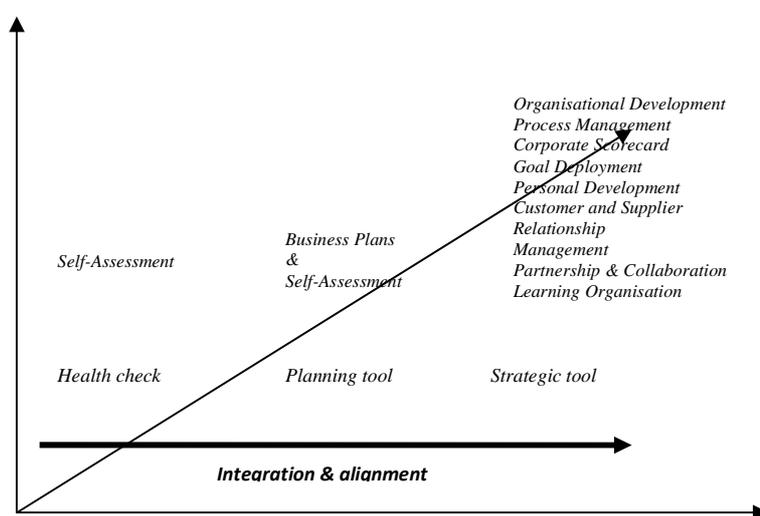
The Enablers examine the organization's activities and the "Results criteria" depict the achievements of the organization. The EFQM excellence model is based on the premise that Enablers direct and drive the results. Simplified, it means that an organization with well developed Enablers will have excellent results. The most important Enablers criteria processes and leadership criteria results customer results, key performance results (Nabitz, Klazinga & Walburg, 2000).

In the material promoting the model EFQM states that "Excellent results with respect to Performance, Customers, People and Society are achieved through Leadership, Driving Policy & Strategy People, Partnerships & Resources and Processes" (Eskildsen, Kristensen & Juhl, 2000). The assessment under the EFQM Excellence Model can be done with 5 different ways (Figure 2).



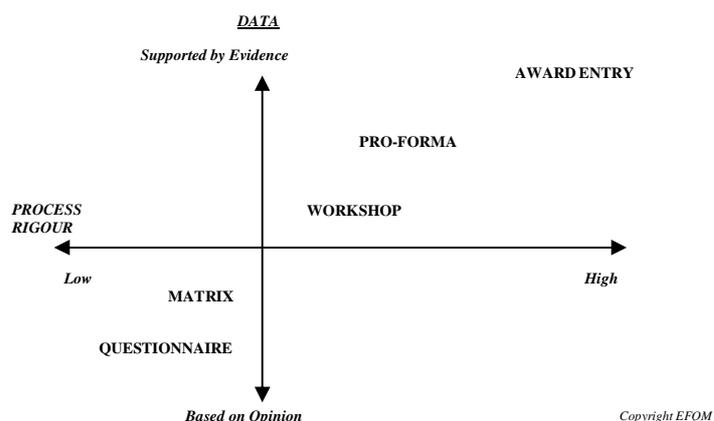
**Figure 2.** Assessment's methods against the EFQM Excellence Model.

As it can be seen, the selection of the assessment method depends on two components: 1) the level of the organization's excellence and 2) the level of the effort made. As the maturity of the organization increases, the use of the EFQM Excellence Model is upgraded. Initially, self assessment creates a set of possible action points that can be considered separate from the operational planning. With the growing understanding of self-assessment's capabilities, actions can be incorporated into the business planning process. Eventually, the organization starts to grasp: a) the opportunity for participation and progress and b) the use of the EFQM Excellence Model as a strategic tool (Pupius, 2001). Figure 3 shows the gradual development, use and integration of EFQM Excellence Model in the organization, starting as a basic assessment tool (health check) and culminating as a strategic tool.



**Figure 3.** The development of EFQM Excellence Model.

The assessment based on this model is flexible, depending on the size, type and maturity of the organization. It can be internal (assessment unit within the organization), external (from people outside the organization), or a mixture of both. The main types of assessment methods are presented also in Figure 4. The selection of each type depends on the organization's level according to the parameters (data, and process rigor).



**Figure 4.** The main types of EFQM Excellence Model assessment methods.

According to the above criteria and knowing: a) the level of components in the selection of the appropriate assessment method for NSFs and b) the lack of previous experience in business excellence and procedures based on TQM, the use of a questionnaire was selected as the most suitable method for an organization such as NSF, which now begins its journey towards business excellence. Also, the questionnaire method is considered by the EFQM as an approach which needs less effort and aims to highlight the views of the people working in the organization.

The EFQM Excellence Model has been used by many areas of private and public sector. The adoption of excellence within the public sector in the UK has been especially publicized within the health care sector. The benefits of the use of the EFQM excellence model within the health care sector are discussed by Jackson (2001) who argues that whilst benefit could have been gained without using the approach, the excellence model at the very least acts as a catalyst.

In case of the UK Wakefield & Pontefract Community Health NHS Trust the use of the model both as a corporate assessment tool and as a framework of key documents has brought many benefits over the full range of the organization's activities and processes (Holland & Fennell 2000). According to Nabitz, Klazinga and Walburg (2000), in almost all European countries the EFQM approach is used by health care organizations for self-assessment. Especially in the UK and the Netherlands there is a national institute formally supporting practical work.

In Spain, self assessment and external audit were carried out during the first semester of 1999 in a primary health care team (EFQM, 2000). German health organizations are obliged to participate in TQM. They started applying the model in 1996 by doing a self-assessment to identify their strengths and weaknesses for each criterion. This led them to the first feedback report that is still referred to today. Subsequent feedback had provided evidence of continuous quality improvements with a high degree of accuracy and consistency – and an entry into the quality award process is being considered (Moeller, 2001).

According to Campatelli, Citti and Meneghin (2011) the health sector is very similar to the education sector because in both cases the patients/students receive a service where they must have an active role, the service is not just provided but also the involvement of the customer is fundamental. Owing to pressures from a range of stakeholders (e.g. government, students and local communities) for a wider and improved range of services from the Higher Education (HE) sector in the UK, linked with a simultaneously increasing pressure on resource utilization, a consortium of UK Universities is currently implementing EFQM excellence model self-assessment as a means for addressing these issues (Hides, Davies & Jackson, 2004). According to Kanji & Tambi (2002: 42) 'leadership' is central in all TQM implementations in Higher Education Institutions (HEIs) and seems to be the most critical factor for its success. A research was conducted in order to deepen the understanding and to encourage further research on leadership best practices for sustaining quality improvement in 42 UK HEIs comprising pre-1992 and post-1992 institutions (Osseo-Asare, Longbottom, & Murphy, 2005) which seems to confirm the previous conclusion.

A Polish machine industry company used the EFQM Excellence Model to assess the selected process. Through this approach the organization is better able to balance its priorities, allocate resources and generate realistic business plans (Michalska, 2008). In India, a heavy electrical equipment manufacturer, and one of the biggest public sector units, Bharat Heavy Electrical Limited (BHEL), initiated serious quality efforts by implementing the TQM which is based on the European Foundation for Quality Management (EFQM) model.

#### *Self-assessment*

The whole purpose of the self-assessment process is to analyze non-satisfactory results and reveal the areas which can improve performance (Oakland, 1999). Self-

assessment is a comprehensive, systematic and regular review of an organization's activities and results, which are referenced against the EFQM Excellence Model. The self-assessment process allows the organisation to discern clearly its strengths, as well as areas in which improvement can be made (EFQM, 2003). The EFQM excellence model is structured into three levels. The top level with the criteria and the second level with 32 sub-criteria contain fixed elements that have to be considered when an organization strives for excellence. The third level of the EFQM process is completely open and its content should be defined by the company itself (Seghezzi, 2001).

It should be noted that, as cited by Heras-Saizarbitoria, Marimon, & Casadesús (2012) 'Pannirselvam and Ferguson (2001) point out in their study – and as both Calvo de Mora and Criado (2005) and Bou-Llugar et al. (2005, 2009) also stress when referring to the limitations of their respective studies based on perceptual variables – the information deriving from a third party who assesses this type of TQM model guarantees objectivity, rigour and less characteristic bias introduced than the information obtained from the management of the organizations themselves that adopt these models'. On the other hand, according to research in Spain in 1999, self assessment and external audit were carried out in a primary health care team and the scores of each criterion achieved by self evaluation are similar to or lower than those assessed by the external audit. (Gene-Badia et al., 2001).

## **Methodology**

### ***Sample***

Eighteen (n=18) HNSFs out of fifty (N=50) were selected to take part in this study. Using their size as a criterion for selection they were categorized as large (receiving over 1.000.000 € as regular government financial support per year), medium (receiving less than 1.000.000 € as regular government financial support per year) and small (up to 100.000 €). Taking into account the percentage of variation in size among all the existing HNSFs, the participating ones emerged from a draw and resulted in seven big sized (39%), seven medium sized (39%) and four small sized (22%) HNSFs.

### ***Respondents***

As McFarlane (2001) reports, with regard to the use of the EFQM as a self-assessment instrument, participants should emanate from all levels of the organization's hierarchy, in specific cases of application of the EFQM Excellence Model. The participants are people employed in the sector/unit that is evaluated (partial evaluation).

On the other hand, when the total of the organization is to be evaluated the sample should consist of people emanating from all sectors/units and from all levels of administrative hierarchy and. Accordingly, in the present study the participants emanated from all HNSF's sectors/units and from all three levels of its administrative hierarchy, namely board members, executives (directors and department – office heads) and employees.

A number of 170 questionnaires were addressed and a total of 100 (58,82%) were returned and considered appropriate for analysis. The representation of the three administrative hierarchy levels was as follows: 37 board members (n=37, 37%), 15 executives (n=15, 15%), and 48 employees (n=48 48%). **Questionnaire**

The data collection instrument was based on the EFQM Excellence Model and it was initially set up using statements, taken from EFQM Excellence Model relevant questionnaires that had been used by companies and organizations, foreign and domestic (i.e. HM PARTNERS s.r.o. Questionnaire EFQM EXCELLENCE MODEL – SME version 2002, Greek Self Assessment Questionnaire of congress centers' interstate network for quality issues). Taking into account that the EFQM Excellence Model allows its adaptation on an initial level of assessment, the basic criteria for their selection were: a) the value they put on the excellence of organisational operations and b) their compatibility with the organisational and managerial environment of sport organizations.

The collected statements were then translated into Greek using a «back to back» translation process. During the translation to Greek (forward translation), important differences were not found between the translators. Eventually, the statements/questions were compared, by a native English speaker, to their initial English formulation and a few differences were found, mostly of a syntactic nature that did not influence the attribution of the statements'/questions' meaning. In order to achieve cultural adjustment the inventory was handed to six individuals employed in sport organizations of all three organizational levels. The participants considered the inventory as straightforward and easy in its application. They made no proposals that could be included in the questionnaire; therefore it remained as it was.

A panel of 5 persons was invited to screen the instrument for its content validity. These individuals were selected based mainly on their organizational and administrative experience in the field of sport. The procedure was based on the Delphi Technique. In particular, they were asked to consent on which statements should be given to HNSFs. As a result of the experts' comments, the statements selected by all team members to

be excluded were erased, others were rephrased and some new ones were added, bringing the final number of questions to 70.

The instrument of this study was comprised of two parts: in the first, questions aimed at collecting demographic information, while the second consisted of closed type questions on a five point rating scale (where 1 = strongly disagree and 5 = strongly agree).

### ***Process***

With the permission of each one of the 18 HNSFs and after prior appointment, one of the researchers visited each one of them in person and distributed the questionnaires. Most of them were completed immediately. The few among them which were not immediately completed were sent to the researcher by post mail.

### ***Data Analysis***

Descriptive statistics were used in order to show the sample's perceptions and the HNSFs' readiness degree about the application of managerial excellence processes according to the EFQM Excellence Model, in their administrative-organizational operations (1st research question). Multivariate analysis of variance (MANOVA) was performed to compare and reveal statistically important differences in the perceptions of the sample according to the hierarchical level of the participants (2nd question), the size of HNSFs (large, medium and small, 3rd question) and the kind of sport (individual – team,) that each one of the eighteen HNSFs cultivates (4th question). In combination with the above, other statistical analyzes used were: a) descriptive statistics, test of homogeneity of variance, analysis of variance (ANOVA) and Bonferroni test to identify statistically important differences in the perceptions of the sample according to the hierarchical level of the participants, b) descriptive statistics, test of homogeneity of variance, ANOVA and Bonferroni test to identify statistically important differences in the perceptions of the sample according to the size of HNSFs and c) descriptive statistics and t-test to identify statistically important differences in the perceptions of the sample according to the kind of sport that each one of the eighteen HNSFs cultivates.

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## Results

***Reliability of the instrument***

To estimate the reliability of the instrument it was used Cronbach's alpha coefficient (Table 1).

**Table 1.** Reliability of instrument's criteria (Cronbach's a).

Rank	EFQM criteria	Cronbach's a
1	Leadership	0,9405
2	Human Resources	0,9277
3	Policy and Strategy	0,9447
4	Partnerships - Resources	0,8876
5	Processes	0,9054
6	People results	0,9345
7	Customers Results	0,9480
8	Society Results	0,7873
9	Key Performance Results	0,8619

The results indicated that all the criteria of the instrument had high level of reliability, as their prices were over 0.75.

Regarding the first research question, 1<sup>st</sup> sub question (if managerial excellence processes of administrative-organizational operations are applied in the HNSFs) and the 2<sup>nd</sup> sub question, (which are the results of their application; readiness' investigation for the application of managerial excellence processes of HNSFs with regard to their administrative organizational operations) descriptive statistical analysis was performed. The result of the analysis according to the five point rating scale (where 1 = strongly disagree and 5 = strongly agree) was that 15,90% of statements-processes which were included in the criteria that constitute the «Enablers», are existing but rarely applied (1,6 - 2,5), 54,54% are not completely and systematically applied (2,6 - 3,5) and 29,54% are applied but more effort is needed for them to be consolidated.

Also, 41,17% of statements - processes which were included in the criteria that constitute the «Results» presented low rating (1,6 - 2,5), 35,29 presented higher rating although still needing more effort (2,6 - 3,5) and 20,58% presented the highest rating which will become excellent with more effort.

According to Table 1 the participants expressed: a) positive perception for the application of statements-processes which were included in the criteria «Partnerships – Resources» and «Key Performance Results», b) «neutral» perception for the application of statements-processes which were included in the criteria «Leadership», «Policy and Strategy» and «Processes», c) non positive perception for the application of statements-processes which were included in the criteria «Human Recourses», «People Results», «Customer Results», «Society Results».

**Table 2.** Descriptive statistics of the sample for Excellence's criteria.

Rank	EFQM criteria Prerequisite	N	Min.	Max.	Mean	Std. Deviation
1	Partnerships - Resources	100	1,00	5,00	3,8729	,93179
2	Policy and Strategy	100	1,00	5,00	3,3970	1,04644
3	Leadership	100	1,00	5,00	3,2833	1,22692
4	Processes	100	1,00	5,00	2,9544	,90819
5	Human Resources	100	1,00	4,88	2,6857	1,05541
6	Key Performance Results	100	1,86	5,00	4,0595	,70962
7	Society Results	100	1,13	5,00	2,8037	,70627
8	Customers Results	100	1,00	5,00	2,6117	1,04823
9	People results	100	1,00	5,00	2,3267	,93281

Also in Table 2 and Table 3 (Enablers and Results) presented the % percentages of the statements according to their application's degree.

**Table 3.** Frequencies % of the Enablers (criteria 1-5) statements – processes.

<b>Frequencies % of statements/ processes</b>	<b>Measurement</b>	<b>Description</b>	<b>Action</b>
	1 – 1,5 I disagree	Not applied	Actions' Development
15,90%	1,6 – 2,5 Rather disagree	Seldom applied	Investigation- Actions' intensification
54,54%	2,6 – 3 neither I agree neither I disagree	Not fully – systematically applied	More emphasis
29,54%	3,6 – 4,5 Rather agree	They were applied but more effort needed	Actions of process' consolidation
	4,6 – 5 I agree	No action needed	Nothing else needed

**Table 4.** Frequencies % of the Results (criteria 6 - 9) statements – processes.

<b>Frequencies % of statements/ processes</b>	<b>Measurement</b>	<b>Description</b>	<b>Action</b>
	1 – 1,5 I disagree	Not applied	Actions' Development
41,17%	1,6 – 2,5 I rather disagree	Seldom applied	Investigation- Actions' intensification
35,29%	2,6 – 3 neither I agree neither I disagree	Not fully – systematically applied	More emphasis
20,58%	3,6 – 4,5 Rather agree	They were applied but more effort needed	Actions of process' consolidation
2,94%	4,6 – 5 I agree	No action needed	Nothing else needed

Regarding to the second research question (if the hierarchical level, according to which the research's participants are categorized, constitute a differentiation factor of

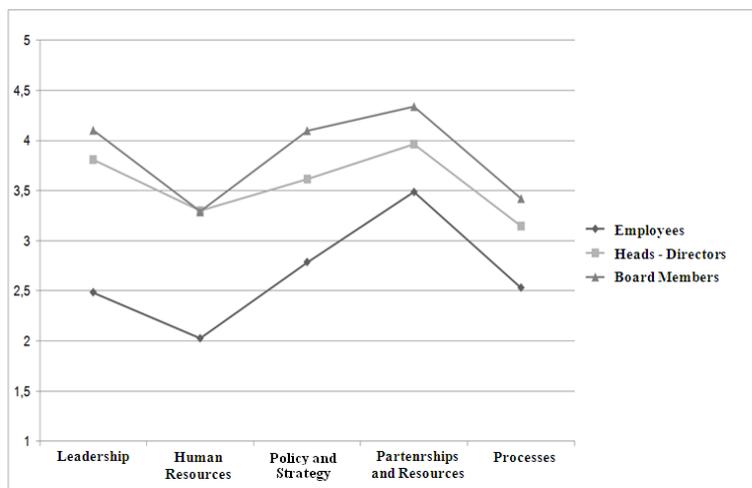
research participants' perceptions) and the third research question (if the NSFS' size and the type of sport, individual – team, which cultivate, constitute a differentiation factor of research participants' perceptions), multivariate analysis (manova) was performed (Table 4).

**Table 5.** Multivariate analysis of variance.

Effect		Value	F	Hypothesis df	Error df	Sig.
HNSFs Size	Hotelling's Trace	1,516	7,409	18,000	176,000	,000
	Hotelling's T <sup>2</sup>	147,052	7,409	18,000	176,000	,000
Hierarchical level	Hotelling's Trace	1,050	5,134	18,000	176,000	,000
	Hotelling's T <sup>2</sup>	101,85	5,134	18,000	176,000	,000
Type of sport (Team-Individual)	Hotelling's Trace	,245	2,450	9,000	90,000	,015
	Hotelling's T <sup>2</sup>	24,01	2,450	9,000	90,000	,015

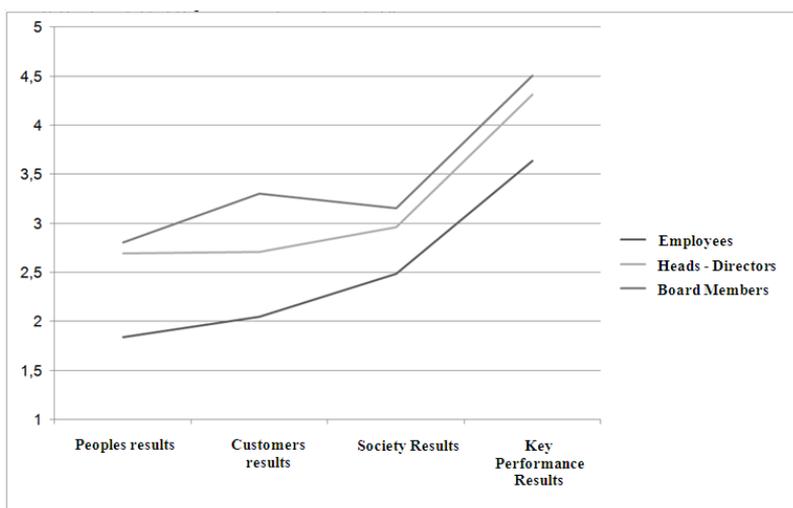
According to the analysis a statistically important difference showed in the opinions between the three levels of administrative hierarchy ( $p < 0,01$ ), the three (large, medium, small) NSFS sizes ( $p < 0,01$ ), and the two types of sports (individual and team) ( $p < 0,05$ ),.

According to the descriptive statistics results, the employees showed the lower means (in terms of the application's degree in «Enablers» criteria, figure 5) followed by the heads/directors and board members who showed the higher results (except the «Human Recourses» criterion, where the means between the Heads/Directors and the Board Members are almost the same).



**Figure 5.** Hierarchical levels' Perception for Enablers.

Employees also showed the lower means (in terms of the application's degree in «Excellence Results» criteria, figure 6) followed by the heads/directors and board members who showed the higher results.



**Figure 6.** Hierarchical Levels' Perception for Excellence Results.

After the Levene statistic test of homogeneity of variance, ANOVA (statistical interrelation Fisher & Welch) that was performed showed statistically important differences among the perceptions of the three hierarchical levels. The Bonferroni statistical test that was followed showed relative agreement between heads/directors

and board members (board members had more positive opinions). In the criterion «Partnerships – Resources» statistically important difference appeared only between board members and employees.

For the third question, (if the size of HNSF constitutes a factor of differentiation in research participants' perceptions), descriptive statistics did not show serious differences between the three sizes of HNSFs. The only exceptions were in the highest values of the 'small' sized HNSFs compared to 'large' and 'medium' sized HNSFs in the criteria «Leadership» and «Policy and Strategy». After the Levene statistic test of homogeneity of variance, ANOVA (statistical interrelation Fisher & Welch) that was performed showed non important statistically differences in the participants' perceptions that emanated from different sized HNSF apart from the criteria «Leadership» and «Policy and Strategy». The Bonferroni statistical test that was followed, showed statistically significant differences of research participants' perceptions, in the criterion «Leadership», between participants from «small» sized and «large» sized HNSFs, as well as in the criterion «Policy and Strategic» between participants from small sized and big/medium sized HNSFs.

**Table 6.** Bonferroni statistical test (HNSFs' size).

Dependent Variable	(I) HNSFs' Size	(J) HNSFs' Size	Mean Diff. (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Leadership	Large	Medium	-,0436	,27248	1,000	-,7075	,6202
		Small	-,8453(*)	,32801	,034	-1,6444	-,0462
	Medium	Large	,0436	,27248	1,000	-,6202	,7075
		Small	-,8017	,35454	,078	-1,6654	,0621
	Small	Large	,8453(*)	,32801	,034	,0462	1,6444
		Medium	,8017	,35454	,078	-,0621	1,6654
Policy and Strategy	Large	Medium	,0330	,22897	1,000	-,5248	,5908
		Small	-,8245(*)	,27564	,011	-1,4960	-,1530
	Medium	Large	-,0330	,22897	1,000	-,5908	,5248
		Small	-,8575(*)	,29793	,015	-1,5833	-,1317
	Small	Large	,8245(*)	,27564	,011	,1530	1,4960
		Medium	,8575(*)	,29793	,015	,1317	1,5833

For the fourth question (if the type of sport that NSF cultivates, constitutes a factor of differentiation in research participants perceptions) the t-test was performed and showed non statistically significant differences between participants from HNSFs which cultivate team sports and HNSFs which cultivate individual sports.

### **Discussion and Conclusion**

According to a research that was carried out in Sports Federations of Lichtenstein, the need for the creation of a qualitative framework, in order to help the NSFs improve their work was identified (Robinson, 2005). Generally, the framework should strengthen the sectors of leadership, human resources, management, finances, sport activity and sport events. It is evident that there are many similarities between the EFQM criteria which were used in the instrument of this study and the factors that constitute priorities for the Sports Federations of Lichtenstein and at the same time that the application of quality and excellence models is necessary.

A research that was done with the support of European Committee and EFQM organization in six European countries showed that the five more important reasons for the application of assessment's program were: 1) searching sectors for improvement, 2) the creation of TQM culture, 3) the guidance of improvement programs, 4) the renewal of motive for the application of quality improvement processes and 5) the management of company (Van der Wiele, Dale, Williams, Kolb, Moreno Luzon, Schmidt & Wallace, 1995).

In this study, an adaptive questionnaire which was based on the EFQM Excellence Model and was developed according to the managerial and functional environment of the HNSFs, was used as: a) a self-assessment's tool in order to provide HNSFs management's picture according to business excellence, b) an instrument evaluating the readiness for application of excellence processes.

According to the results of the study, processes of management's excellence do exist and are indeed applied, but neither often nor systematically. The perception of the sample is that the processes are applied few times and not systematically and appropriately, except in the criteria «Partnerships – Resources» and «Key Performance Results» where there were better results. Similar results, in regard to processes' application degree, were presented in relative studies that were carried out in public organizations (Institute of Agricultural Researches Cyprus, 2008) and in second degree

educational institutions (Koltsakis, 2008). Also the results of studies which were carried out in companies, showed that most of the criteria were lower but close to medium level (Heras-Saizarbitoria et al., 2012) and the overall performance of the organizations surveyed was low (Lobo, Matawie & Samaranayake 2012). Low level quality practices and performances were also identified in research concerning quality performance evaluations of 3-, 4-, and 5-star hotels in Iran (Arasli, 2012). Self assessment and external audit which were carried out in a Spanish primary health care team (public employees) showed that the criteria with the lower score were Leadership, People, Partnerships and Resources, and Impact on Society. The criteria with the higher score were Processes and Customer Satisfaction (EFQM, 2000).

Something else that emerges from the research is the differentiation in perceptions between the three hierarchical administrative groups. Similar results for difference in perception among hierarchical levels is also presented in other researches (i.e. Papadimitriou & Taylor, 2001; Fahlén 2005).

As Arasli (2012) reports in his research, managers expressed a moderate score (between 4, agree and 3, neutral), while chiefs and employees reported (<3) low levels of quality culture practices in their organizational settings.

In this particular moment, according to the results of this present study, a management excellence program may prove difficult to apply in the HNSFs, because there is no common perception and agreement between the parties involved on the meaning of management's excellence and what profits it may produce for sport organizations. This fact constitutes a basic prerequisite for the application of Total Quality processes, which clearly constitutes a strategic choice for top level administration (Dervitsiotis, 2005). This is possible only when it has become accepted by all members of the organization, no matter what their level of hierarchy may be, because it aims at the creation of organizational culture, where each member of the enterprise is responsible for the common final result in quality (Tsiotras, 2002). In the same line of thought, Zelnik, Maletič, Maletič and Gomišček (2012) state that employees at all levels in an organization should be involved in establishing, implementing and maintaining a documented ISO 9000-based quality management system. Also, as cited by Green (2012) 'TQM requires participation, by everyone, on a permanent basis 'demanding a unitarist style of management where the values of workers and managers in respect of the company are the same' (Yong & Wilkinson, 1999; Snape, Wilkinson, Marchington & Redman, 1995).

It is also worth noting that although the Federations are not considered to be part of the public sector they have a strong connection with it as they are funded and supervised by a governmental agency (General Secretariat of Sports) and operated in accordance with the laws of the state. According to Campatelli et al. (2011) during the last years, a number of TQM approaches have been employed by the public sector, such as quality circles, quality action teams, customer surveys, and training. In Italy, as in the UK, the improvement of quality and efficiency in the service provided has only had a slow progression. For the authors this is mainly due to the lack of resources dedicated to quality improvement and the lack of training.

Also as cited by Zelnik, Maletič, Maletič and Gomišček (2012) 'the introduction and implementation of a QMS are always conditioned by the readiness of management, who usually provide the initiative (Beer 2003)'. Furthermore, Beer provides four pieces of advice which management should take into consideration when implementing a QMS: Management must establish an efficient dialogue following a top-down hierarchy, as well as horizontally between the business processes. Management must encourage employees to become aware of quality with their own initiative, improvements and adjustments. Management must ensure a business climate in which the employees can openly discuss the challenges of improving quality. Management must actively participate in the implementation of a team-based organization.

As Weeks, Helms and Etkin (1995) stated 'The organizational readiness process would inform the organization about the scope and the purpose of the quality initiative and help encourage support and participation'. Dahlggaard-Park and Dahlggaard (2007) report that they found in too many cases that top management still do not use enough time and resources to involve lower management in a real policy deployment process; having already pointed out in an earlier article that 'the pre-condition for building an excellent enterprise is empowerment' (Dahlggaard & Dahlggaard-Park, 2006).

For these reasons team building energies are proposed such as:

- a) empowering of solidarity and organizational quality culture,
- b) organizing seminars aiming at training HNSFs personnel with regard to management's excellence.

A training period is always required in order to allow the organization's people involved to fully understand the meaning of the model and its application (Campatelli et al. 2011). Top management should use 'people-based management' where they

support, lead, coach, and increase the efficiency of teamwork and give sufficient empowerment to enhance participation and provide better training and education to back up these improvement efforts (Arasli 2012). Calvo-Mora, Leal and Roldán, (2005) tested empirically the positive effect of people management, including teamwork and training on process management, included in the EFQM model structure.

- c) establishing an office responsible for management's excellence matters,
- d) assigning the management's excellence projects to an employee, project manager, or specific team in order to be in charge of the processes. Oakland, Tanner and Gaad (2002) recommend and affirm the need to establish teams to achieve the improvement of processes that the EFQM model proposes.
- e) co-ordination of energies according to a specific plan of action shaped on a timetable base. According to Gutiérrez- Gutiérrez, Torres and Molina, (2010) the EFQM model and Six Sigma methodology, require a thorough implementation of teamwork and employee training.

It is worth noting that one of the most important factors for successful implementation effort of a total quality management model is the willing and commitment of top management to stay focused and to follow the path of quality and excellence.

Furthermore, a major requirement for successful TQM implementation is commitment of top management to the intervention (Sila & Ebrahimpour, 2002; Yong & Wilkinson, 1999). Much of the existing literature supports the need for strong quality culture leadership that promotes agreement and understanding between employees, supervisors, and managers for a successful quality culture initiative. As seen in the literature, initial employee resistance and dysfunctional organizational culture for change are those which had been shown as one of the most important reasons for the destruction of many TQM efforts before they even began (Arasli, 2000, 2002). It should be noted that there is a precondition with this model; staff may come to a common agreement with the support of top management to accept change, become committed, and perform company objectives.

Something else that emerges from the study is that the size of the HNSF doesn't constitute a key factor of differentiation in research participants' perceptions. Statistically significant differences of participants' perceptions were observed only in the criteria «Leadership» between participants from small sized and large sized HNSFs and «Policy

and Strategic» between participants from small sized and big/medium sized HNSFs. An external observer would probably expect that in large sized HNSFs due to larger annual financial subsidy and also due to the increased number of players, clubs and officials involved, procedures of management's excellence would be more applicable, aiming in higher quality administrative and operational level. This, however, was not detected from the study's results. It should be noted however that wherever a statistically significant difference exists (in the criteria "Leadership" and "Policy and Strategic") people who belong to small sized HNSFs have more positive perception in comparison to those who belong to big/medium sized HNSFs. A possible explanation for the statistically significant differences between these groups is that small sized HNSFs, whose people have the most positive views, are likely to have a more flexible (less number of individuals) and effective leadership to implement quality management processes probably due to their limited size in economics, number of employees, unions, athletes, etc. for which they are responsible. Also, in small sized HNSFs control and supervision is easier and more regular due to their smaller size, as the participation of many people in the processes it is not required.

Another clear observation to emerge is that the type of sport that the HNSF cultivates (team sport or individual sport) doesn't constitute a factor of differentiation in research participants' perceptions.

In this study a first attempt was made to assess the Hellenic National Sport Federations' (HNSFs) organizational-managerial operations and the investigation of their readiness degree for the application of Management Excellence's processes, according to European Foundation of Quality Management (EFQM) Excellence Model. The instrument of the research was an adaptive questionnaire which was based on the EFQM excellence model and was developed according to the managerial and functional environment of the HNSFs. Through the process outlined, the organizational-managerial profile of HNSFs is reflected and particularly their strong and weak areas in accordance with the EFQM excellence model.

The findings of the study show that processes of management's excellence do exist and are indeed applied, but neither often nor systematically. The HNSFs management, organization and functioning, which is based on the decisions of its Board members, has nothing to do with a structured and workable model of quality management processes.

Another clear observation to emerge is that different hierarchical groups hold different perceptions. This suggests that a rethinking is needed about the assessment of the HNSFs organizational-managerial operations and of their readiness degree for the application of Management Excellence's processes, on both conceptual and practical grounds. Conceptually, the evidence supports the principle that a multi-perceptual approach leads to more complete information for assessing organization's management. Practically, the utilization of multiple and different sources may be more accurate because it identifies various types of appraisal bias, but it raises questions of feasibility. The feasibility is prejudiced by the different positions of power between the different groups.

In this moment, a management excellence program may prove difficult to apply in the HNSFs, because there is no common perception and agreement between the parties involved on the meaning of management's excellence and what profits it may produce for sport organizations. For this reason, empowerment group actions are suggested above.

The findings of the study also reveal that a) the size of the HNSF doesn't constitute an essential factor of differentiation in research participants' perceptions apart from the criteria «Leadership» between participants from small sized and large sized HNSFs and «Policy and Strategic» between participants from small sized and big/medium sized HNSFs and b) the type of sport that the HNSF cultivates (team sport or individual sport) doesn't constitute a factor of differentiation in research participants' perceptions.

It is important to note that this study has the following limitation: It may be useful to increase understanding about the perceptions of a larger number of participants, in order to gain a more detailed view about HNSF's organizational-managerial operations and the investigation of their readiness degree for the application of Management Excellence's processes, according to EFQM Excellence Model.

Finally, the repetition of the research will be useful in order to asses HNSF's organizational-managerial operations according to EFQM Excellence Model, after team building energies' application.

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