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**Master's Thesis of Public Administration**

**Perception of Public Health Performance in  
District Hospitals in Tunisia: towards a  
unified view between practitioners and  
managers**

**튀니지 지역 보건소의 공중보건 성과 인식:  
의료진과 관리자 간 통합적 관점을 중심으로**

**August 2019**

**Graduate School of Public Administration  
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# Perception of Public Health Performance in District Hospitals in Tunisia: Towards a Unified View between Practitioners and Managers

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# **Abstract**

## **Perception of Public Health Performance in District Hospitals in Tunisia: towards a unified view between practitioners and managers**

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District hospitals in Tunisia, unlike regional and university hospitals lacked a unified model to assess their overall performance. The need to design a common performance model seems to be crucial to figure out the main weaknesses of the first line of health system; and thereafter improve the quality of health care delivery. The first step to conceive an assessment performance model goes through the set up of a common conceptualization of public health performance among stakeholders in district hospital. That's why understanding the divergence and consensus in perception of performance dimensions between managers and practitioners is considered as a pillar to further implementation of a unified model agreed by all.

Herein, this study presents the main conclusions of a questionnaire addressed to managers and practitioners of district hospitals about their conceptualization of public health performance. The questionnaire was

conceived using the performance model of **Sicotte et al (1998)** with its four dimensions. Factorial analysis through the PCA method as well as student test indicates diverging attitudes among professional groups towards dimensions of public health performance. A qualitative approach through interviews reveals a divergence in orientation between these actors. Managers have a holistic view about dimension of health care delivery taking into consideration all technical and managerial aspects. In the other side practitioners because of their struggle for social recognition in the district hospitals have a narrow view of public health performance limited to their professional situations and their previous expectations about work in the first level of healthcare services.

Unifying the views of all actors towards public health performance seems to be crucial to design a framework of public health performance model. The main efficient way to do that is by enhancing dialogue and communication between actors inside the organization as well as with the central administration. The integrative model that results from the mix of these different conceptualizations will be useful for the designing of performance measurement tools which help responding to the accountability demand towards these organizations.

**Keywords : District Hospitals, Public health Performance, Sicotte et al model, perceptions, Managers, Practitioners**  
**Student ID: 2017-23729**

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# Chapter 1 Introduction

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## 1.1 Background of the study and statement of the problem

In 2012, ministry of health of Tunisia defined the relevant guidelines of public health reform to improve the quality and the efficiency of national Health system. The ministry through its regional directions set out a program to invest in health care system at the first line level of health care delivery<sup>1</sup>. The goal was to supply district hospitals and intermediate centers with laboratories and machines of magnetic imagery as well as to strengthen the medical staff with medical specialities. In order to guarantee continuity and availability of health services in every district and sub district with required quality, the plan was to restructure hospitals of primary care by the creation of medical centers (type 4) and the redistribution of basic health consultations between these structures to reduce pressure on regional and university hospitals.

To achieve the expected outcomes of the reform, an effective management of district hospitals seems to be the corner stone of the success of such program. Furthermore, it's important for policy makers and managers to handle effectively the scarcity of financial resources allocated to such program as well as doctors and nursing shortages. The increase of health expenditure in the first line of health care (from 180.3 millions of USD in 2012 to 210.3 Millions USD, almost a rise of 17%)<sup>2</sup> and improving the health care service with quality and efficiency has become a top priority challenge.

The effective management lay in some information and indicators essential for guiding decision making. In this vain, hospital performance or

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<sup>1</sup> Dialogue societal sur les politiques, les strategies et les plans nationaux de santé-Tunisie 2013

<sup>2</sup> Institut National de statistiques [www.ins.nat.tn](http://www.ins.nat.tn)

Public health performance, therefore, needs to be assessed with accurate way to judge whether the reform undertaken was successful or failed. Performance measurement offers policy makers opportunities to secure health system improvement and accountability<sup>3</sup>and to foster the quality of decisions made by actors including practitioners (medical staff) and managers.

Measuring the public health performance is also a concern for researchers. Many studies which deal with this topic were developed more than 100 years ago. In the early of 1900, Dr Ernest A. Codman with his ‘*end results hypothesis*’ at the Massachusetts General Hospital considered that performance measurement began to come up as a feasible tool for assessing health care quality, <sup>4</sup>but, inspite the endeavours to measure the performance in health system, huge number of unresolved issues about gathering data and setting up such information continue to prevail<sup>5</sup>.

JEROD M. LOEB (2004), noted :

*« A significant part of the challenges in measuring performance in health care derives from the disparate nature and variable perspectives represented among the key stakeholders»*

According to that, the perception of Public health performance differs between actors mainly managers (administrative staff) and health care providers (Medical staff); and challenges faced by them are multiple and in opposition. Therefore, confronting opinions of different categories of actors according to their professional status to determine the possible areas of consensus or divergence in perceptions seems to be primordial for setting common

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<sup>3</sup> « Performance Measurement for health systems improvement : experiences, challenges and prospects », WHO European Ministerial Conferance on health systems : Health Systems. Health and wealth, Tallin Estonia 25-27 june 2008

<sup>4</sup> McIntyre D, Rogers L, Heiei EJ. “ Overview, history, and objectives of performance measurement”. Health Care Financing Review, 2001, 22:7–43

<sup>5</sup> See ref 3.

framework to assess public health performance. As a result, a study that investigates this divergence on perception in defining public health performance in District hospitals would allow managers and policy makers to not only understand the concept from different perspectives but to draw a unified model of performance measurement between the main stakeholders (managers and health care providers)

## **1.2 Purpose of the study**

The objective is to identify the divergence in conceptualization of Public health performance between actors (Managers and Practitioners) within districts hospitals in Tunisia and try to define the areas of divergence to take them into account in further implementation of measurement model of performance.

In this study, in the first step we try to define a set of relevant, applicable performance indicators in public health structures according to the current literature review. In the field of organization theories, we try to present the **Sicotte model (1998)** which revamp various components of performance using the theory of Social action of **Parsons (1977)**, this integrating model seems to provides a conceptual framework broad enough to understand the performance of an health care organization in all these dimensions. In the perspective of public health management we rely on the fundings of **Donabedian (1966)** carried out at the end of 60s when he had worked on the evaluation and measurement of performance in the health care field.

In a second step, we want to confront the opinion of different categories of actors - according to their group professional membership - to determine what the possible areas of consensuses or divergences are. The highlighting of these areas of consensus or divergence is important because a hospital can not

perform - whatever the definition of performance used – only if it adheres to achieve a set of common goals.

A quantitative study is contemplated in this focus in order to collect data needed. Primary data through questionnaires, addressed to the managers of district hospitals (almost 100) and presidents of medical comities as well, will be planned to be gathered. After that, my interpretation and analysis of these data rely on what tendency observed in the software SAS or SPSS. It is worth to notify that the questionnaire will be conceived according to the main important variables selected from the literature review. For the recommendations after analysis of data we will try show up the most important path of agreement between actors in district hospital in order to improve the performance and thus the quality.

### **1.3 Significance of the study:**

Public health performance has become an important indicator of health care used by policy makers, researchers, consulting agencies. The US federal Agency for health care research and quality (AHRQ) sets numerous of performance indicators in order to allow comparison between health care structures (Abbott, White et al, 2011). In 2003, the WHO initiated a project with objective is to develop and disseminate the evaluation of hospital performance using a global tool, named Tool Assessment for Quality Improvement in Hospitals (PATH) (Veillard, Champagne et al. 2005). Through this tool, the WHO European Regional Office wants to help hospitals evaluate their performance, analyze it and implement performance improvement actions. In the same vein, many European countries through their objectives to reorganize the health system, tried to develop a measurement model of performance for their hospitals. They focused on norms and standards of quality, patient safety and patient satisfaction. The uses of medico administrative

indicators as well as a set of pathologies are required to draw up these expected models.

In Tunisia, in 2010, the ministry of health has launched a program to upgrade the public health sector and strengthen health care services as part of a loan from the World Bank. One of the objectives of this program is the support for the implementation of a medico economic information system and the enhancement of the performance measurement in public health structures by providing the adequate medical and financial information.

Despite the efforts taken by Tunisia in strengthen the performance of public health structures, and the interest to implement an information system dedicated to address such issue in the second line and third line of health care delivery, district hospitals are not covered by this program. Since, no model has yet been implemented in district hospitals that would take the different sides of performance into account.

Nevertheless, Performance has been described as a complex and multidimensional concept because of the multitude of expectations towards the health sector. Authorities, managers and patients, medical staff do not express the same need and requirements (Lombrail, al .1999).

This research project will examine from the point of view of different organizational actors (members of the management team and practitioners). This study will also make it possible to see the main areas of divergence and conflict between these actors. The results of this project should make an important contribution to renewing the performance management practices in the area of district hospital. They will be useful to better understand the concepts of performance management favored by the organizational actors involved in delivering primary and basic healthcare services. Eventually, these results will make it possible to implement tools for measure of performance that meet organizational goals while taking into account the preferences of

practitioners and managers at the same time. Such tools can be seen as both to improve the health and safety of patients and to create better working conditions. By providing understanding on the respective expectations of different groups in terms of care performance, this study will shed light on possible differences between different perspectives and the challenges posed to managers in reconciling these perspectives in the process of development and operationalization of a system of performance management.

## 1.4 Conceptual model

The conceptual framework for this study is adapted from the model of **Sicotte et al (1998)**. This model (Figure 1) takes the various elements of the performance and reorganizes them relying on Parsons social action theory. This theory provides a conceptual framework broad enough to understand the performance of an organization in all these dimensions.

According to this model, dimensions of performance are gathered around four dominant poles of organizational performance:

- ✓ **goals attainment** in term of efficiency, effectiveness and stakeholders satisfaction
- ✓ **environmental adaptation** which can be assessed by these dimensions :the capacity to acquire resources, ability to mobilize community support responsiveness to population needs, social values, capacity for market presence, capacity for innovation and learning
- ✓ **culture and values maintenance** turn around its dimensions of consensus with fundamental values and Organizational climate of collaboration
- ✓ **production** which includes service volume, the coordination of production factors, the productivity and the quality of care and services

In the same ideas, there are also six alignment functions which ensure the obstinacy and the sustainability of the equilibrium of the system: operational, strategic, tactical, allocation, legitimization, contextual.

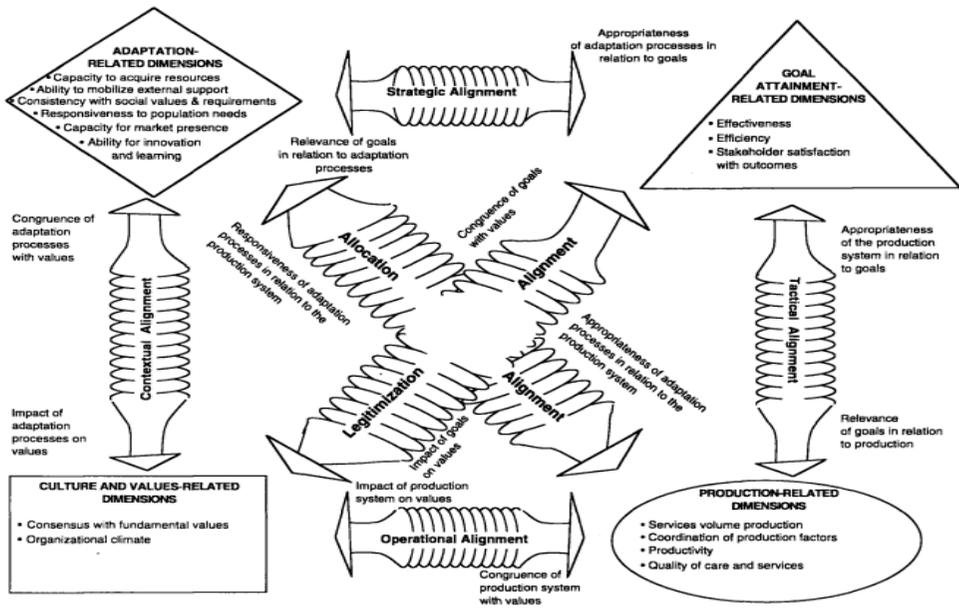


Fig. A conceptual framework of health care organizations performance.

**Figure 1: Model of Organizational Performance (Sicotte et al, 1998, p34)**

## 1.5 Problem Statement:

This study seeks to show the diverging opinions among professional groups (Health administrators and healthcare delivers) about their conceptualization of hospital performance, and to delineate zones of divergences useful for further implementation of a measurement model of hospital performance.

Through the data collection from questionnaire addressed to professional groups (practitioners and managers) in district hospitals and after conducting the statistical analysis of data through PCA method, the distribution of factorial score for each factor extracted from each set variables defining each

dimension(goal attainment, adaptation, culture and production as well as the alignments between these variable).

The descriptive statistics of factors related to each performance dimension added to the t test can show the consensus or the discordance in conceptualization of hospital performance using these defined variables.

Hence, the three research questions are:

***Question 1:*** How do health administrators conceptualize public health performance in district hospitals in Tunisia?

***Question 2:*** How do Health care practitioners conceptualize public health performance in district hospitals in Tunisia?

***Question 3:*** Where are the divergences in conceptualization of public health performance between the administrative staff and the medical staff in district hospital in Tunisia?

## Chapter 2      The Background of District Hospitals in Tunisia:

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Since the independence until the 1980, all healthcare facilities are concentrated mainly in big urban areas and city, this trend was inherited from the French colonial tradition of hospital centered health infrastructure. From 1980 to 1990, Tunisia had undertaken several steps to reform the health system in order to improve the quality of health, and narrow the regional gap and inequality in the access to health care service. Thus, the focus was on the development of the first line level of healthcare delivery by creating new district hospitals and decentralized the network to respond to the immediate needs of the population. District hospitals were considered as the entry point in the health public sector<sup>6</sup> they offer general medical care, a maternity ward, and basic medical services. By dint of primary health care structures since the reform of 1980, the primary health care coverage is improved and the health status of Tunisian citizens continues to improve with the expansion of the preventive and curative healthcare services. Broadly speaking, Primary Health care is the pillar of the whole health system, the quality of provision of health care services at this level has been recognized as fundamental to improving health outcomes<sup>7</sup>. The following statistics of 2006 <sup>8</sup>prove this finding:

- The percentage of the population having access to local services is almost 96% prenatal care coverage is 96%.
- Births attended by skilled health personal is 95%

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<sup>6</sup> Arfa C, Achouri H. Tunisia: “Good Practice” in Expanding Health Care Coverage: Lessons from Reforms in a Country in Transition. In: Pablo G, George JS, Hugh RW, eds. *Good Practices in Health Financing Lessons from Reforms in Low- and Middle-Income Countries*. Washington: The World Bank; 2008:335-438

<sup>7</sup> Friedberg MW, Hussey PS, Schneider EC. Primary care: a critical review of the evidence on quality and costs of health care. *Health Aff (Millwood)* 2010; 29(5): 766-772.

<sup>8</sup> <http://www.emro.who.int/emrinfo/index.asp>

- Percentage of 1 year olds immunized with (BCG, DPT, OPV, Measles, Hepatitis B vaccines) is 98%
- Life expectancy is almost 75.5 in 2016 it was 48.88 in 1968, so the population gained 26.62 years in life expectancy at birth
- Infant mortality rate of Tunisia fell gradually from 141.5 deaths per 1000 live births in 1967 to 11.7 deaths per 1000 live births in 2016

The reform of primary health care level was characterized by two major programs: the implementation of family planning and fertility reduction since 1960 and the integration of maternal and child health and reproductive health program (monitoring of pregnancies, immunizations, postnatal care, and birth spacing).

All these features of the background of Public district hospitals are issued from a legal framework which regulates activities, attributions and prerogatives of these facilities. But inspite all these positive attributes, the first line health care facilities still face many problems.

## **2.1 Legal framework of District hospitals:**

Since 1990, Tunisia has undertaken several steps to reform the health system in order to improve the quality of health, health protection, and the performance of the overall health care structures. The first one is the enactment of law organizing the public health facilities and classifying it into four categories. According to the article 10 of the law n°63 of 1991 on health Organization, public health facilities are classified according to their mission, equipment, technical level and territorial jurisdiction in four levels:

- ✓ primary healthcare centers (2135)
- ✓ Public district hospitals (108)
- ✓ Regional hospitals (32)

- ✓ University hospitals (23)

The law aforementioned enumerates the attributions of Public district hospitals (PDHs). They provide preventive and curative health services and health education. Their functions enshrined in the article 11 and 12 include

- ✓ the treatment of common diseases, maternal and child protection including family planning,
- ✓ prevention and control of communicable and contagious diseases and immunization,
- ✓ providing pre-school, school and university medicine services,
- ✓ dissemination through health education, hygiene rules and rules relating to the protection of the environment
- ✓ Gathering and analysis of sanitary and epidemiological statistical data.

Moreover, PDHs provide general medicine, obstetrics and emergency services; they have hospital beds and diagnostic equipments adapted to the nature and volume of their activity.

Besides, the arrangements concerning the organization of health-care activities of the first level in health districts, as tackled by the legislation on the organization of health facilities and more particularly district hospitals are explained in the decree of application n 2825 of the year 2000 dated in 27 November 2000. This decree defines responsibilities of all stakeholders in the district hospital such as the director, the Chief medical of Sanitary district (médecin chef de circonscription), the pharmacist of the district unit, and the nursing officer

## **2.2 The major problems in Management of district hospitals:**

Public District hospital presents many specificities and exceptions in their style of administrative management, finance, and methods of providing

healthcare service. The public district hospitals are still struggling to face the cumbersome challenges especially related to the inequality in distribution of healthcare resources across the country, lack of financial and technical resources, lack of staff and the ineffectiveness in management. We can aggregate these problems into three groups: financial problems according to the administrative staff, lack of resources and the ineffectiveness of the activities provided.

### ***2.2.1 Administrative and financial problems***

First over all we have to notify that 22% of the public health fundings<sup>9</sup> are allocated to the PDHs. These later do not benefit, by the reimbursement through billing system for patients covered by social health insurance unlike regional and university hospitals. Their budgets are composed only by the state subsidies from the annual budget and by user fee revenues.

Financial Reforms implemented since 1990 are focused more specifically on regional and university public hospitals by giving them more financial and managerial autonomy for governance and clinical decision making. Furthermore, the social health insurance reform, tried to improve finance and performance of health system particularly for the secondary and third level of health care delivery.

Adding to that, The PDHs suffer from a lack of clear strategic planning and management due to the weak financial resources and the totally dependence to the central authority (Ministry of Health)<sup>10</sup> and the heavy legal procedures in

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<sup>9</sup> Ministry of Health (MoH). Annual Statistical Book of Hospital's indicators. Tunisia: Department of Publics' Hospital; 2011

<sup>10</sup> Arafa et al : « Measuring the capacity utilization of public district hospital in Tunisia : Using Dual Data envelopment analysis Approach », International Journal of Health Policy and Management, 2017,6(1),9-18

management such facilities. They are not allowed to take decision before the preliminary authorization from the central authority or purchase any things without abiding to the legal and administrative process. Activities of District Health Unit are limited to monitor the state of the overall health of the population under its jurisdiction and managing the human financial and material resources. Stakeholders and actors in the PDH are constraint to follow the instructions of the hierarchy (central and regional authority) and to report periodically the progression of their activities.

### ***2.2.2 Technical problems :***

The main technical problem is the lack of materiel resources (equipment and basic furniture) required to provide healthcare services with according to norms of quality and relevance to the population. Sometimes, Practitioners have to deliver services without diagnostic tools, in poorly maintained premises and unsuitable for patient flows<sup>11</sup>. The budget allocated to curative and preventive care in PDHs (22% of the special envelope for preventive care)<sup>12</sup> is not sufficient to produce the expected results and outcomes in term of involvement, awareness and care of the population in district remote areas.

This situation of weakness of technical platforms causes an underutilization of the capacity of the PDH. The capacity utilization was generally evaluated by using input-based indicators such as the bed occupancy, length of stay, or in term of inpatient days and number of beds. The bed occupancy rate (BOR) is a measure of utilization of the available beds, more precisely the percentage of occupied beds. These indicators show for the PDHs a low percentage of occupied bed which vary between 25%-38% in 2011 compared to conventional

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<sup>11</sup> Said Ben Sedrine and Mongi Amami : “ La gouvernance du système de santé publique aggrave l’inégalité sociale face au risqué de la maladie en Tunisie”.Ed.Fondation Friedrich.Ebert, Tunis 2016

<sup>12</sup> Ibid

accepted levels (80%-85%)<sup>13</sup>. This weakness is due to the inability of practitioners to admit patients because of lack of required materials and the lack of nurse staff for monitoring during the diagnostic or therapeutic procedure and afterwards, during recovery.

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<sup>13</sup> Same as 10

## Chapter 3 Literature Review

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This literature review surveys the state of study of health performance in district hospital. A set of articles published and studies undertaken over many years ago were examined if they focus on research related to the health performance in the context of district hospitals similar to the existing health system in Tunisia. Even though there are many studies exploring the dimension the dimension of hospital performance in some dimensions without tackling the issue of divergence in conceptualization and understanding within professional groups working in the some health structure.

For that reason, the search was expanded to include all dimensions setting of health performance according to model of Sicotte et al (1998) in order to distinguish aftermath between the responses of different professional groups involved in the performance of healthcare structure.

This review is organized in two major areas:

- ✓ The definition of the concept
- ✓ The dimensions of health performance

So the chapter will :

- ✓ Review the nature of structure of district hospitals in Tunisia according to the current health care system
- ✓ Define the concept of performance in health care organizations
- ✓ Examine the dimensions of health performance
- ✓ Review some indicators of measurement

### 3.1 Definition of concepts

According to Bourguignon (1996: 20) and Louart (1996: 3), the word "performance" may allow a wide range of interpretations depending on the context in which it is used. The word performance makes sense different in the

situations in which he is employed. It collects the senses according to the occasion (Louart, 1996: 3). More present than ever, at the heart of the discourse and the definition of the problem in human resources management, the issue of the defining the performance goes beyond a simple question of vocabulary and of a rational analysis of organizational strategies: it contributes to the dimension social and symbolic of management (Bourguignon, 1996: 29). In accordance with these authors, Voyer (2002: 84) defines performance as an encompassing integrating concept very difficult to define precisely. According to him, we can consider performance as an “*added value to an initial state*”, such as achieving a result minimum required or acceptable or as “*the reduction of the undesirable*”. It may be the answer for a need, no more and no less in terms of quantity, quality, cost and time. The author goes on to mention that performance can also represent the juxtaposition of the efficiency, effectiveness and soundness of an organization. A fundamental aspect of the performance is related to the perception of the nature and the function of the hospital: its missions, the conditions of its prosperity, and its relations with the environment ... the conceptualization of the organization conditions the meaning given to the term "performance"

Thus, we can conclude that performance is a complex multidimensional concept. Expectations for the hospital sector are multiple. Authorities, managers and patients do not express the same needs and requirements (Lombrail, Naiditch et al., 1999). Evaluating hospital performance is not an easy task, there is no consensus around what everyone sees as part of the performance and therefore what needs to be measured. It can be apprehended in different ways and a wide range of data can be used for this purpose.

As what has been mentioned above, we try through this part to define a conceptual model of performance based on models issued from the public

health management sector and the economy in health (paragraph 1) and the theories of organizations and management (paragraph 2)

### ***3.1.1 Performance models issued from public healthcare management field***

Through this section, we try to present the major initiatives of performance evaluation undertaken by national and international organizations which are part of this same multidimensional perspective. First, **the World Health Organization** has developed a framework for evaluating the performance of health systems to help governments to measure their own performance, to understand the factors contributing to and improving (WHO, 2000). According to WHO (2000)<sup>14</sup>, a system of health is successful when it achieves the best results p with available resources. According to this evaluation framework, the performance of the health is captured through 5 dimensions:

- ✓ the general health level of the population,
- ✓ health distribution in the population (between the different socio-economic subgroups)
- ✓ the degree of reactivity (respect for people and interest for users)
- ✓ the distribution of this reactivity, and
- ✓ the distribution of the financial contribution.

Second, **WHO Europe** has also developed a performance evaluation framework Named the "Performance Assessment Tool for Quality Improvement in Hospitals" (PATH) (WHO, 2004)<sup>15</sup>. This evaluation framework integrates 6 dimensions: 1) effectiveness clinical process of care and

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<sup>14</sup> OMS. (2000). Rapport sur la santé dans le monde : Pour un système de santé plus performant. Genève : OMS.

<sup>15</sup> OMS. (2004). Performance assessment tool for quality improvement in hospitals (PATH). Barcelone : Bureau régional OMS de l'Europe

outcomes, 2) efficiency (productivity), 3) taking into consideration staff needs (practice environment, recognition of individual needs), 4) responsiveness of governance (public health orientation) (5) patient and staff safety and (6) centrality in relation to patient in terms of service and respect.

Third, Inspired by the work of WHO, the Organization for Cooperation and Economic Development (OECD)<sup>16</sup> has also conceptualized an evaluation framework performance of health systems based on four criteria: the improvement of health of users, responsiveness, equity (at the level of care, finances and access health care and services) and efficiency (OECD, 2002).

It seems important to emphasize that these initiatives are essentially focused on performance in the health system level or, in some cases, the organizational performance. The individual level is rarely taken into account.

### ***3.1.2 Approaches of performance according to organizations theories:***

In this paragraph, two approaches of defining and designing the measurement system of performance are presented. The first one seems to be part of the continuity of classic management reflects the search for an ideal model (one best way) to appreciate and manage performance. This approach often favors a unique dimension of performance. The second approach seems to be more in line with the systemic perspective and seeks to integrate different dimensions of performance reflecting different functions or components of the action systems

#### *3.1.2.1 rational model of performance*

According to Cameron (1978), this model is not always appreciated since it is difficult to reach consensus among the members of an organization

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<sup>16</sup> OCDE (Éd.). (2002). Être à la hauteur : Mesurer et améliorer la performance des systèmes de santé dans les pays de l'OCDE. Paris : Santé Canada.

on the goals to be achieved. Other models have been proposed in order to define what the performance (Cameron, 1978). **According to the resource acquisition model**, an organization is successful if it manages to get the resources it needs to survive and grow (Yuchtman & Seashore, 1967) and if it has the ability to innovate and to transform in order to adapt to environment's changes (Contandriopoulos et al., 2008). As for **the internal processes model**, the latter focuses on the quality of production processes (Ketchen, Thomas, & Mc Daniel, 1996). This model appreciates the performance of the organization in terms of volume, intensity, quality, coordination and safety (Contandriopoulos et al. 2008). Stability and control are highly valued (Champagne et al., 2004). **The model of human relations** considers that an organization performs well if it manages to create and maintain a healthy work environment and harmonious relationships between the different actors working within it. The performance is thus appreciated according to the quality of the work climate and the commitment of stakeholders to the values organizations (Adler & Borys, 1996). **According to the political model**, an organization is efficient if it manages to satisfy at least the internal and external issues interest groups. Interest is focused on negotiation and compromise (Cameron, 1986; Champagne et al., 2004). Lastly, according to the model of social legitimacy, the survival of an organization is the result of a commitment to legitimate activities (align the processes and results with social values, norms and objectives) (Cameron, 1986, Champagne et al., 2004).

According to Sicotte et al. (1998), the use of these models in organizations provides a fragmented and incomplete vision of the actual performance. This diversity of interpretations of performance through different models with distinctive aspect is also reflected in the conceptual confusion of the different dimensions used by the actors to refer the same concept of performance: efficiency, effectiveness, efficiency, productivity, quality, etc.

Each actor shapes his own interpretation of the performance which makes it difficult to implement management systems of the performance that must integrate the different perspectives of the various groups of actors. The use of models integrating these various dimensions would then be more adequate. According to Contandriopoulos et al. (2008), the extended use of these unidimensional models could lead to imbalances between the different functions (Achievement of goals, acquisition of resources, integration of internal processes and maintenance of the values and standards) that organizations must fulfill in order to be “performant”.

### *3.1.2.2 Integrated approach centered on dimensions of the performance: The triad of Donabedian*

The conceptual model most widely used in the evaluation of the performance of healthcare organizations is the normative model of the system rational action (Champagne et al., 2005). Inspired by the theories of action in sociology (Weber, Parsons, Simon, etc.), Donabedian (1966) proposed that the quality of care can be assessed using standards not only of outcomes, but also process and structure. Nowadays, this model is not used only to appreciate the quality of healthcare, but also to measure and to evaluate performance in organizations. This model is also called the **triad of Donabedian** (Donabedian, 1966). By using the triad of Donabedian, we can appreciate the quality of health services from the structure triad (have good things), process (do the right thing) and results (get good results). It is presupposed that the structure influences the process which in turn affects the results

- ✓ **The structure** : refers to the tools and resources that can be deployed to achieve results. This includes material resources (eg equipment), human resources (eg the quantity and qualifications of the medical staff) and organizational structures (eg, number of doctors per patient).

- ✓ **The process** includes activities related to the provision of care that are implemented by health professionals to achieve the results (eg doctors interventions).
- ✓ Finally, **the results** are the effects of the relationship between structure and process (eg, patient's state of health, patient satisfaction with care delivered, achieving the goal) (Donabedian, 1996). Jennings, Staggars and Brosch (1999) identified a model for classifying results into three categories to have a better understanding of these. **Results can be centered on the patient** (patient satisfaction.), or centered organization (eg access to services, cost, mortality, morbidity, duration hospitalization, etc.) (Jennings et al., 1999). Donabedian's model provides a framework that is both robust and easy to understand to measure and evaluate the quality of care (performance), even if the three elements of the triad are not always easy to operationalize. According to Donabedian (1988), it is important to consider the three elements of the triad when an complete evaluation of quality is desired. However, attention is often focused only on structural elements and results since these dimensions are easier to measure. Process elements that refer to interventions of practitioners are often ignored since they are very difficult to operationalize. Less attention is also paid to the links between the different elements of structure, process and results because of the difficulty in establishing these links.

When all elements of structure, process and results are considered in quality assessment, it can be difficult to determine which outcome is associated with which structural or process elements. In other words, it can be difficult to determine the existence of influence between the various elements of the triad. On the other hand, we can identify which elements of the structure or process dimensions are well done or require improvement to preserve or modify the result. We can also blame this model for not taking into account the external environment of the structure-process-result (SPO) system. Indeed, this system

is bathed in an environment that can directly influence the dimension of structure and indirectly the process and result dimensions (Unruh & Wan, 2004).

### **3.2 Indicators of Public health performance :Model of Sicotte and al (1998)**

It's worth to notify that the challenge for the evaluation of performance are not to determine the best set of performance indicators, but rather to choose the relevant indicators in the specific context of the organization (**Quin et Rohbaugh, 1983**). Thus, **Model of Sicotte and al (1998)** can be considered one of the most global and comprehensive model that exists about performance and demonstrates the multidimensional character of the performance. Measuring and evaluating the performance are based on the measurement of indicators (sub-dimensions) within each of the four functions (Contandriopoulos et al., 2008). This model is a model for comprehensive and integrated evaluation of the performance of health systems is inspired by the social action theory of Parsons which states that a health organization can be seen as a system organized action within a given context.

#### ***3.2.1 Parson's Social System Action theory :***

It is a functionalist view considered dominant in theories of organizations that seeks to elucidate how social systems develop and survive. According to this theory an organization is a social system. Its goals are defined by its place in society. It is not only an economic entity but also and above all a political system with a requirement of integration of its different components and the sharing of values and an institutional culture. From the outside, the organization is an object intended to fulfill a number of goals and objectives while, from the inside, it is a socio-technical system.

An organized system of action is composed of three interacting components, ie a **physical structure** (eg building, human resources, financial resources, etc.), **an organizational structure** (eg a set of laws and rules) and a **symbolic structure** (eg values and beliefs of actors). Inside the structure are found interdependent actors (health professionals, managers, etc.) whose activities (processes), the production of goods and services, make it possible to achieve the purposes (results) of the organization (Champagne et al., 2004).

### ***3.2.2 theory of communicative action of Habermas (1984):***

In order to deal with the diversity of stockholders and their different perceptions towards dimensions of performance in the context of health care organization, arbitration among these competing values seems to be crucial to attend a unified perception between them.

In this logic, Habermass (1984, has proposed the principles of a process of constructive mediation between actors in a social system as Person defined.

According to this theory, actors have different expectations and different plans in the future of their organization. Consequently, the creation of exchange apparatus and share of discussion, as well as promotion of freedom of expressions among stakeholders seemed to be indispensable to permit the plurality of opinions to be arbitrated and a compatible consensus with the collective well being.

By this way, the Habermas supposition will facilitate the propagation of ideas and constructive discussions; so that no particular imposed interest over the collective well-being could have been emerged.

### ***3.2.3 The four functions of Sicotte Model and the resulting dimensions***

Parsons' theory focuses on four functions that are reiterated in the Sicotte model and recognizes that an organized system of actions must assume four functions in order to survive or to be effective, these functions are:

1) ***Goals attainment*** that are developed and valorized by the organization (improvement of the health of the individuals, efficiency, efficiency, users satisfaction), it includes four sub-dimensions of the performance

- ✓ the satisfaction of the population with the healthcare provided and services received in the system,
- ✓ effectiveness (health outcomes),
- ✓ efficiency (health outcomes in financial resources invested) and
- ✓ equity (equal distribution of healthcare and services in the community as needed)

2) ***Environmental adaptation*** in term of acquiring resources to provide services based on needs and adapt to technological, population, political constraints, this comprises five sub-dimensions, namely

- ✓ the acquisition of resources,
- ✓ adaptation to the needs of the population (resources and structuring of the system that fit the needs of the population),
- ✓ adaptation to the requirements and trends (adaptation of the health system to environmental changes, technology, etc.),
- ✓ community mobilization ("Scope and intensity of social capital of the environment, support and support it receives " ),
- ✓ innovation and system transformation and customer attraction (competition).

(3) **Production** is in an integrated way (coordination of services, volume of care, services, activities, intensity, being productive and ensuring the quality of care), includes 4 sub-dimensions:

- ✓ productivity (produce according to the availability resources),
- ✓ quality (components of the process that foster the expected outcome),
- ✓ volume of care and services
- ✓ products and coordination of production

4) **Culture and values maintenance** (equity, freedom and efficiency). This fourth function comprises two sub-dimensions.

- ✓ the consensus on the values of the system and
- ✓ the organizational climate (atmosphere that delineates the involvement and commitment of staff towards organization (Savoie & Brunet, 2000)) (Champagne et al., 2004)

This last dimension of values' creation or maintenance facilitates or constrains the three previous functions (Contandriopoulos et al., 2008)

### ***3.2.4 the interchanges between functional subsystems***

Each of the four functions has its particularity, but according to Parsons' theory, they interact with each other by six "alignments" or "balances" that demonstrate the dynamic character of the performance. Indeed, alignments demonstrate the interactions between the four functions (Champagne et al., 2004, Contandriopoulos et al, 2008 and Sicotte et al., 1998). These alignments are:

- 1) **Strategic alignment** which consists in interchange between the adaptation function and the goal attainment function. It tries to address:
  - ✓ the appropriateness of adaptation process in relation to goals,
  - ✓ the relevance of goal choices in relation to adaptation process

- 2) **Allocation alignment** consists in the interchange between the adaptation function and the service production function and various resources acquired by the healthcare organization. The dimensions performance are
- ✓ Appropriateness of adaptation processes in relation to production, and the optimal integration of the production in relation to available resource
  - ✓ Responsiveness of adaption processes in relation to service production in term of coherence with population needs
- 3) **Tactical alignment**: its purpose is to ensure the interchange between the goal attainment function and the service production function. Dimensions of performance are essentially:
- ✓ The extent of production process characteristics are adequate to enhance goal attainment
  - ✓ Relevance of goals choice in relation to production
- 4) **Operational alignment** : to characterize the interchange between the latent values maintaining function and the service production function in term of :
- ✓ Accordance of production system with organizational values
  - ✓ Impact of production system on the enhancement of organizational values
- 5) **Legitimization alignment** to characterize the interchange between the culture and values maintaining and the goal attainment function. Because of plurality of professional group within the healthcare organization; debating the values of each group and negotiating about the choice of goals reinforce the political loyalty of the organization and facilitate the goal attainment.

- 6) *Contextual alignment* focuses on the interchange between the adaptation function and the culture and values maintaining function. The healthcare organization needs to transform itself to be up-to-date with the changes in the environment.

Sicotte model can be considered as one of the most global and comprehensive approaches to performance and demonstrates the multidimensional nature of performance. Performance measurement and evaluation is based on the measurement of indicators (sub-dimensions) present within each of the four functions (Contandriopoulos et al., 2008). This conceptual frame, contains many indicators and with of links between the dimensions. Furthermore, his model can be useful for assessing the performance of health organizations taking into account the four functions and the links between them. It can be used as a starting point for discussions between the different actors in order to have a system of indicators making it possible to judge the performance of an organization according to their values, perceptions and beliefs.

## **Chapter 4      Methodology and Procedure of research**

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It's about a quantitative exploratory study which seeks to identify the conception of public health performance that make managers as well practitioners of district hospitals in Tunisia using a modified Sicotte et al (1998) conceptual frame.

This chapter tackles about the design by defining the population of the study and the sampling techniques, setting data collection through the questionnaire, and analysis plan of the study

### **4.1 type of the study**

This research is a quantitative study based on an exploratory approach. An exploratory research aims to fill a gap about a topic in writing (Van der Maren, 1996). In addition, this type of research explores how a phenomenon manifests itself as well as its underlying processes (Polit & Beck, 2008). Indeed, this choice stems from the fact that no known research exploring performance conceptions directly with the organizational actors involved in the provision of primary health care services in district hospitals in Tunisia has been conducted. All studies about public health performance in healthcare organizations had been undertaken only in the context of university hospitals and regional hospitals. Notwithstanding the importance role played by district hospital in providing the first line of providing healthcare services as well promoting preventive health care; no special attention paid to the performance of these structures. This type of study is appropriate for exploring the conceptions of performance conveyed by practitioners and managers /administrators and whether there are conceptual differences or similarities between these two groups.

After undertaken a quantitative method and extracted the main important factors in which professional groups emphasize more, a qualitative approach need to be undertaken in order to understand the reasons behind the results, a qualitative study is intended to answer the "why" question. It aims to understand the characteristics of a population, their attitudes, their motivations...regarding the circumstances of the study, interviews with defined limited number of managers and practitioners (4+4) seems the most convenient methods to collect qualitative data and understand in deep the why of such perceptions and responses.

The interviews 'themes', and questions ensuing should be chosen in a precise manner and different from what was asked before in the questionnaire

## **4.2 Design of the study**

### ***4.2.1 The targeted community and population :***

This study focuses on district hospitals in Tunisia. Such an environment is appropriate for collecting quality performance data since organizational actors working in this area are challenged daily by this issue (CIHI, 2007). In fact, staff working in district hospitals is constantly working with different types of patients (immunization, common diseases, post maternal family planning, contagious diseases, non communicable diseases...) presenting with often critical health problems. Administrators also face many challenges to handle the scarcity of resources and the required needs of physicians for materials and equipments as well as the population with medicines, and quality health service

### ***4.2.2 Sample***

The sample consisted of practitioners who are designated as chief physician district (Médecin chef de circonscription) and administrators as the directors.

Actors are characterized by their values, their beliefs, their knowledge, their plans, their intentions, the resources they have or control and their willingness to act (Champagne et al., 2004). Actors on district hospitals do not have the same profiles and are at different hierarchical levels in the organization which has increased the probability of collecting data with varying perspectives of performance.

Sampling was done by reasoned choice in both cases. This type of sampling allowed us to choose the participants based on the desired criteria (Polit & Beck, 2008).

The choice for only chief doctor district was done according to the significant experience in the performance of district health care, the knowledge of all administrative and legal issues in management fields.

The chief physician district represents all physicians working within the district hospital. The managers of district hospitals have all administrative information concerning the activities of the organization and they control and monitor all healthcare related projects in the district, that why taking into account the perception of these actors seems to be crucial because it underlines all the perceptions of administrative staff.

A required sample size of more than 50 district hospitals chosen using four or five hospitals from each governorate (except for big cities such as Tunis and Sfax) is judged indispensable to use the formula for hypothesis testing in the factor analysis and the statistical distribution of factorial notes between groups.

### **4.3 Data collection**

The data collection will take place over three months and consisted of three separate procedures:

- ✓ Preparing the questionnaire and
- ✓ Pretest of the questionnaire
- ✓ Method of Data collection
- ✓ interviews

#### ***4.3.1 the questionnaire***

The questionnaire used is constructed on the basis of the Sicotte et al (1998) conceptual frame. The authors made a set of performance indicators existing in the literature in management and organization of health services

Items in this model are grouped into the four dimensions aforementioned and the fourteen sub-dimensions of the performance. However, we will subtract some sub-dimensions of the model to take into account the context and the particularities of the district hospitals. The alignments will be taken into account in the elaboration of the questionnaire contrary to what was done by Ann-lise Guisset et al (2002) in their performance measurements in the Belgian hospitals by eliminating these dimensions for the sake of heaviness and precision of the questions asked.(see annex 2).

The questionnaire is arranged in two sections:

The first section represents the four functions underlying the performant social system according to the Sicotte et al model, it consists of 14 items corresponds to dimensions of performance for each function. For each item 5 points scale questions are asked about.

The second section describes the evaluation questions for the interchanges between the four functional subsystems such illustrated by Sicotte et al in his article. For each item 5 points scale questions are asked

### **4.3.2 Pretest of the questionnaire :**

Before starting the distribution of questionnaire to the defined respondents, it seems crucial to plan a pretest of the first draft of the questionnaire by sending it to a limited number of respondents in order to maintain a reasonably sized questionnaire and to verify the adequacy of the questionnaire with the context of district hospitals is guaranteed. Pretest can be done in order to: *“minimize obstacles in the data collection process...ambiguous questions can be detected which is often followed by a decision either to revise or drop them because of their complexities”* (Handbook of Research Methods in Public Administration 1999, p246). Thus, some modifications and corrections should be taken into account in drawing the final version of the questionnaire.

### **4.3.3 Method of quantitative data collection**

The choice of method of data collection depends on its appropriateness in answering the central research question in a study. The choice of particular mode is linked with the availability of time and even funds. For that reasons, we adopt the choice of an online survey seems to be more suitable than other mode, because it is not costly and convenient to the situation of distance between researcher and respondents as well as a solution for the constraint of time.

Respondents are selected from the list of Directors of district hospitals and addresses of internet. The department of planning and studies in the ministry of health of Tunisia plays a crucial role in follow up of responses of designated interviewers. The responders receive a cover letter which explains the importance and the purpose of the survey and the whole study. Researcher has to assure confidentiality for responders. A thank letter should be also addressed

in appreciation of their cooperation and for providing information and taking from their time to answer to the questionnaire.

The target population comprised of all directors from the 120 district hospitals in Tunisia. The questionnaire was arranged according to dimensions of performance defined in the literature review based on the Sicotte et al model. It contains 57 items 5-point Likert scale items about public health performance evaluation.

Out of the 220 questionnaires sent to district hospitals, Only 140 completed questionnaires have arrived. About two-third (63%) answered. The response rate was the same between directors (72 responders) and practitioners (68 practitioners).

To identify the constructs to which correspond the dimensions of performance, a principal component analysis PCA with varimax rotation was performed in order to:

- compare dimensions constructed theoretically with the empirical dimensions underlying the sample responses;
- Consolidate the information contained within a large number of variables (from items of a questionnaire) into a restricted set of new composite dimensions while ensuring a minimum loss of information (Hair et al., 1998). The purpose is to bring out the constructs or dimensions underlying a set of variables.
- Compare performance approaches according to different professional groups no longer on the basis of theoretical dimensions (constructed a priori) but on the basis of the dimensions observed empirically (constructed a posteriori). In order to distinguish the dimensions constructed of the observed dimensions, called the "Factors".
- Make a t test to verify the difference between the two professional groups concerning the defined factors

#### 4.3.4 Interviews

An interview guide was constructed using different aspects of the results obtained from the quantitative study. The skype interview was conducted using different themes from the previous questionnaire in a way to explaining the answers collected.

They were recorded so that they could later be retranscribed for analysis. Before beginning the interview, participants were reminded of several things: the purpose of the interview, the length of the interview (less than 20 minutes), the expectations of the participant. Socio-demographic and occupational characteristics are summarized in Table 15 below.

	Managers				Practitioners			
number of years of experience	18	8	10	16	9	14	10	12
Number of years of experience in district hospitals	14	02	06	12	7	14	9	10
Number of years of experience in this position	12	02	05	10	3	10	6	7
Age	52	36	40	48	37	42	40	43
<i>Belonging to this region</i>	yes	yes	no	No	no	yes	no	yes

**Table 1: Sociodemographic characteristics of INTERVIEWED the actors**

## **Chapter 5 Data interpretation and Presentation of results:**

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This chapter tackle the description of the methodology used to explain the topic and present the main findings of the research study. Results conveyed through this study are presented according to a particular technique of condensing variables “Principal component Analysis” on SPSS program. After presenting data, the analysis consists on comparing the different score of each factor between categories of responders (managers and practitioners).

### **5.1 comparison of the preferred factors according to occupational groups : Quantitative approach :**

Whatever approach chosen (by item, by factor), in order to compare the opinions of different professional groups, the objective is to compare the rankings items, factors. In this case, to compare the importance given to each factor according to professional groups, it’s necessary to build factor scores for each responder through the PCA analysis. The comparison concern the two groups (practitioners and managers).

#### ***5.1.1 Reliability analysis :***

In order to verify the reliability of the statistical data extracted from PCA method, we have to ensure first over all that there are minimal correlations (more than 0.3) between the items or variables that will be analyzed, in the annexes for each item of each dimension we can recognize that there are correlations with at least four items. In this respect, one can create a correlation matrix with all the variables of the analysis and examine the magnitude of the coefficients. This matrix is an option available in the SPSS menu of the factor

analysis. Furthermore, we have to check the correlation significance between variables “p value”; it must be less than 0.05 to be significant.

#### *5.1.1.1 Measurement of sampling adequacy (KMO)*

In order to present a global view of the correlation between items and to assess its quality, the measurement of sampling adequacy is required. The KMO index varies between 0 and 1 and gives additional information to the examination of the correlation matrix. His interpretation is as follows:

- ✓ 0.80 and above Excellent
- ✓ 0.70 and more Good
- ✓ 0.60 and over Poor
- ✓ 0.50 and over Miserable
- ✓ Less than 0.50 Unacceptable

#### *5.1.1.2 Bartlett sphericity test*

This measurement indicates whether the correlation matrix is an identity matrix within which all the correlations are equal to zero. We hope the test is meaningful ( $p < 0.05$ ) so that we can reject the null hypothesis that it is an identity matrix that means that all variables are perfectly independent of each other.

The table below resumes the reliability of statistical test (KMO and the Bartlett sphericity) undertaken to extract factors for each performance dimension.

<b>Dimensions</b>	<b>KMO indicator</b>	<b>Interpretation</b>	<b>Bartlett sphericity</b>
Adaptation	0.836	Excellent	0.000<0.05
Goal attainment	0.761	Good	0.000<0.05
Production	0.706	Good	0.000<0.05
Culture and value maintaining	0.715	Good	0.000<0.05
Alignments	0.732	Good	0.000<0.05

**Table 2 : Results of Reliability INDICATORS**

### ***5.1.2 Factorial notes***

For each factor defined we try to assign a note for each individual. After that, we try to present the descriptive analyzes for each factor with each group. This step is crucial because through it we can delineate the differences between professional groups in each factor. This comparison between the different values of the descriptive statistics according to the socio-professional categories of actors can detect the various representations of the performance and analyze the consensus or the divergence of perceptions.

### ***5.1.3 Statistical test of difference between the two groups of actors (t test):***

To determine whether there is a significant difference between the means of each factors extracted from the PCA analysis for each group, the T test seems to be crucial to confirm or not the hypothesis of our research.

## **5.2 Results**

For each dimension (adaptation, goal attainment, production, culture), we extracted their relative items to consolidate them into factors using the PCA in SPSS. The following tables present the different factors relative to each dimension:

### 5.2.1 Adaptation to environment dimension:

This dimension includes 12 items, the correlation between them is not important but at least there are four items with correlation more than 0.3 (collaboration with institution, services highly valued by the population, work within the limits of budget, treats more patients than other neighborhood hospitals, providing services not available elsewhere). From these items we try to extract more than 0.4, to give a convenient representation of factor. The following tables represent the quality of extraction of each items, and the factors deduced from PCA method with varimax rotation.

#### Communalities

	Initial	Extraction
Qualified staff	1,000	,438
Collaborating with other institutions	1,000	,536
Managed to get a substantial increase in his budget	1,000	,710
Services are highly valued by the public	1,000	,567
Adapts its activities in response to the needs of the population	1,000	,394
Takes into account socio-demographic data	1,000	,552
Informing the population of changes	1,000	,567
Works within the limits of its budget	1,000	,682
Treats a large part of the population	1,000	,267
Treats many more patients than other neighborhood hospitals	1,000	,483
Providing services not available elsewhere	1,000	,469

Extraction Method: Principal Component Analysis.

**Table3 : quality of items extraction for the adaptation DIMENSION**

- **The second step consists on specify the number of factor** that we need to extract from data. Two criteria are common in determining the number of factors to extract:

- ✓ **The "eigenvalue" (eigenvalue):** is the most used criterion. The higher the initial eigenvalue, the more the factor accounts for a significant portion of the total variance. By convention, any factor with an initial eigenvalue greater than 1 is considered as a significant factor. The SPSS result output displays the percent variance explained only for factors with an initial eigenvalue greater than or equal to 1. Table 5 resumes the eigenvalue for variables representing the adaptation dimension

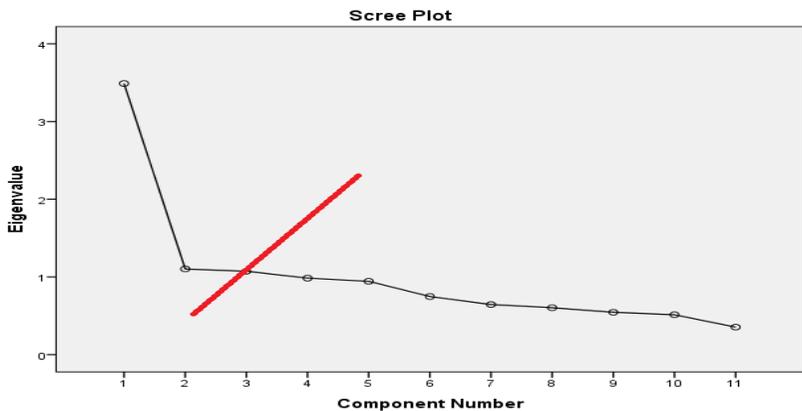
**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,489	31,720	31,720	3,489	31,720	31,720	3,241	29,461	29,461
2	1,102	10,021	41,741	1,102	10,021	41,741	1,329	12,085	41,547
3	1,073	9,754	51,495	1,073	9,754	51,495	1,094	9,949	51,495
4	,984	8,949	60,445						
5	,944	8,578	69,022						
6	,748	6,797	75,820						
7	,645	5,859	81,679						
8	,604	5,487	87,167						
9	,545	4,953	92,120						
10	,513	4,665	96,785						
11	,354	3,215	100,000						

Extraction Method: Principal Component Analysis

**Table 4: The eigenvalue and total variance explained for adaptation dimension variables**

- ✓ **Cattell's elbow** is another criterion for determining the number of factors. It is possible to ask in the options associated with the ACP to make a graph from the eigenvalues. As shown in the graph all points represent the eigenvalues of the components. They are connected by a line. Only the factors that lie before the abrupt change of slope are retained. The points following this change, called elbow fracture, seem to form a horizontal straight line. The information added by the factors represented by these points is of little relevance.



**Figure 2 : Scree plot of factors for adaptation dimension**

The total variance explained from the extraction of variables 51.495 %, 3 factors consolidate all items of this dimension. Variables with highest absolute value are detained to represent each factor.

- **The third step is the review of the component matrix (without rotation)**

This matrix contains the weights of the variables on each factor. These weights are actually the correlation between the variable and the factor. They serve to interpret the role of each variable in the definition of each factor. They therefore indicate the degree of correspondence between the variable and the factor. The higher the weight, the more the variable is representative of the factor.

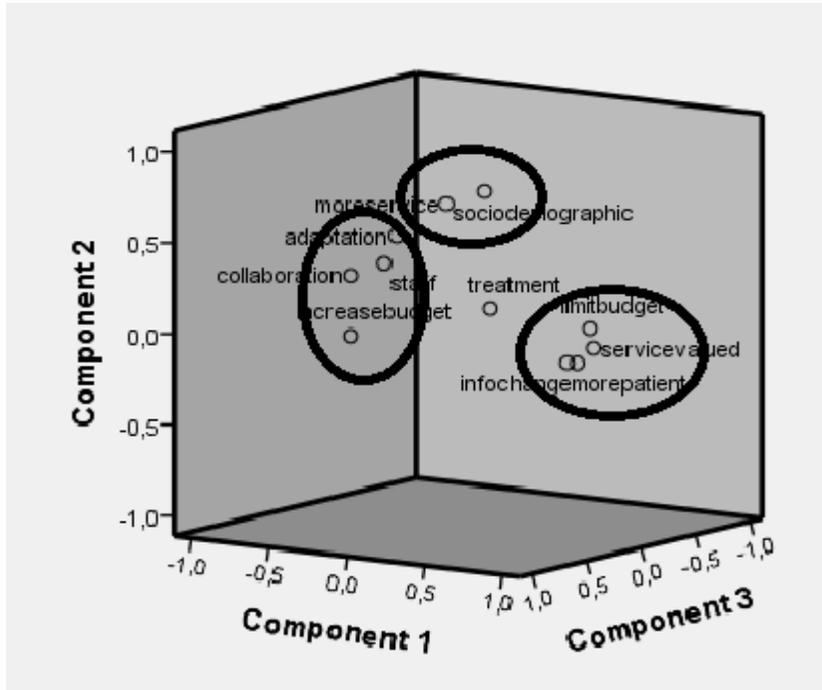
In general, the first factor extracted is the one that explains the most variance and is therefore the best possible combination of variables. The other factors have less residual variance to explain. Consequently, they represent less and less optimal combinations. Although interesting, this matrix is not the most meaningful in terms of interpretation. In almost all cases, it is necessary to rotate the factors to simplify the correlational matrix between factors and variables.

- **Examination of the matrix of components after rotation**

Factor rotation involves virtually rotating the factor axes around the point of origin in order to redistribute the variance to be explained more equitably. The factorial solution then obtained is simpler to interpret and is theoretically more relevant than the solution without rotation. The rotation may be orthogonal when the factors are perceived as being independent of each other

<b>Component Matrix<sup>a</sup></b>			
	Component		
	1	2	3
Qualified staff	-,651	-,055	,108
Collaborating with other institutions	-,729	,043	-,056
Managed to get a substantial increase in his budget	-,205	,659	-,483
Services are highly valued by the public	,729	,044	,184
Adapts its activities in response to the needs of the population	-,430	,423	,173
Takes into account socio-demographic data	-,295	,120	,671
Informing the population of changes	,740	,129	,053
Works within the limits of its budget	,753	,249	,230
Treats a large part of the population	-,170	-,432	,228
Treats many more patients than other neighborhood hospitals	,684	,118	,033
Providing services not available elsewhere	-,279	,434	,450
Extraction Method: Principal Component Analysis.			
<b><u>Table 5: the distribution of ADAPTATION 's items between factors</u></b>			

This table summarizes the result of factor reduction process. In fact, after 4 iterations of rotation, three factors converge as below (graph n°1)



**Figure 3: Component Plot for Adaptation dimension**

- factor 1 includes the following items: service highly valued by the population, works within the limits of its budget, treats more patients than other neighborhood hospitals, informing the population of changes. This factor represents the **capacity of the organization to acquire resource** (budget, reputation, capacity to respond to the increase in the number of patients)
- factor 2 includes the items relative to **response to the needs of the population** (collaboration with other institutions, managed to get substantial increase in his budget and adapt its activities to the needs of the population)
- factor 3 includes only item relative to providing services not available elsewhere, take into account socio-demographic data, but we have to mention that concerning the variable of treating large part of the population

is not taken into account in our analysis because its quality is extraction is not strong (almost 26% of communalities)

To compare the importance given to each factor according to occupational groups, we assign a factor scores for each individual. After that we carry out a descriptive statistical analysis to highlight the perception trend for each group. The tableau below summarizes the statistical analysis for factor score for the dimension adaptation

<b>distribution of factorial scores of adaptation dimension between professional group</b>				
statut professionnel		REGR factor score 1 for analysis 1	REGR factor score 2 for analysis 1	REGR factor score 3 for analysis 1
0	N	68	68	68
	Mean	-,8885975	,2059127	-,0344583
	Std. Deviation	,52385066	1,05175144	,96379093
	Minimum	-2,28505	-2,54961	-1,87680
	Maximum	,82573	2,47229	2,40501
1	N	72	72	72
	Mean	,8392309	-,1944732	,0325439
	Std. Deviation	,47782526	,91374201	1,03873687
	Minimum	-,25853	-2,12645	-2,33759
	Maximum	2,07081	2,33713	2,36250
Total	N	140	140	140
	Mean	,0000000	,0000000	,0000000
	Std. Deviation	1,00000000	1,00000000	1,00000000
	Minimum	-2,28505	-2,54961	-2,33759
	Maximum	2,07081	2,47229	2,40501

**Table 6: descriptive statistics of factorial score for adaptation**

**DIMENSION between professional groups**

As stated in this table, we observe that the mean factorial score for practitioners in factor 1 is

-0.888 while is +0.8392 for managers. The same logic for the two other factors show a divergent perception between these two groups. The importance is not strong for the third factor because it explain only 8% of the total variance analysis

The standard deviation measure give us indication about the distribution of variables, for the first factor the Std is 0.5238 for the group of practitioners and 0.477 for the group of managers which is considered acceptable. In the other side, the Std for the third factor is important comparing to the mean, there are an important variations between observations in the same group. Statistically speaking we cannot rely on this factor because its distribution is too wide.

– **T test analysis:**

The sig (p-value) for F test determines which row of numbers to use. If the value is less than 0.05 so the variances of these two groups are not assumed to be equal, in this case the second line for t test results is used for analysis.

For the t test for equality of mean, the use of sig (p value) determines the decision of reject or confirmation the null hypothesis of the research question:

- If the p value is less than 0.05 so the reject of the null test is necessary and the alternative hypothesis is confirmed. And based on this, the conclusion is that there is a significant evidence to support the research question: the professional status does affect the perception towards the factor of performance deduced from PCA method.
- In the other case when p value is more than 0.05 so we maintain the null hypothesis and we confirm the conclusion that the professional status does not affect the perception towards defined factor of performance

After running the SPSS independent T test for the factors related to the adaptation dimension, the results show the following value

Factor	P value for t test	Decision
Capacity to acquire resources	0.00	Reject H <sub>0</sub> →there is difference between two groups
Response to the population needs	0.000	Reject H <sub>0</sub> →there is difference between two groups
Factor 3	0.693>0.05	Confirm H <sub>0</sub> →No difference between two groups

### 5.2.2 dimension of goal attainment :

According to this dimension, district hospital is considered “performant” if it improve the effectiveness, the efficiency and the patients satisfactions. These performance items are regarded as the main goals that organization tries to achieve.

Pursuing the same logic and process in the first dimension, we can deduce for this dimension only two factors can be extracted from the PCA method:

- the first one is related to the effectiveness and efficiency in term of reducing cost, best allocation of budget and the patients satisfaction
- the second one is related to the willingness to improve the performance of health care services by focus on health outcomes and the development of databases to evaluate and track the performance.

it’s worth to note in this context that, the item “presents low percentage of patients have complication is considered as a consensus item representing the same perceptions between the two actors. These results can be deduced from

the graphs below:

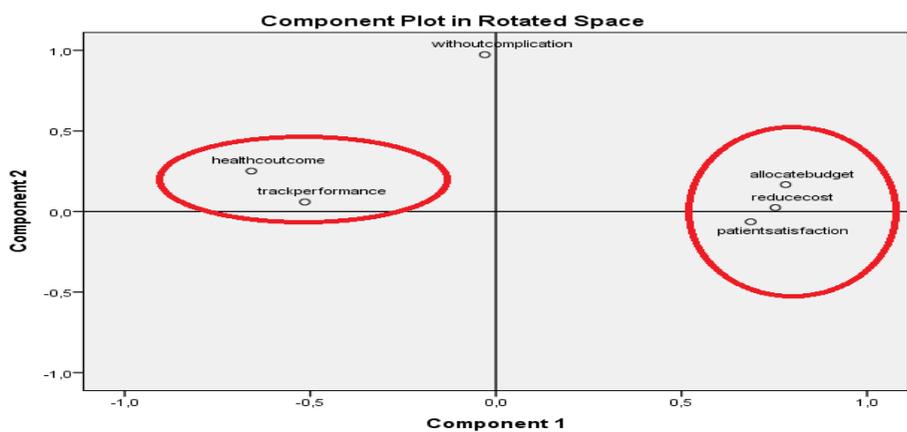


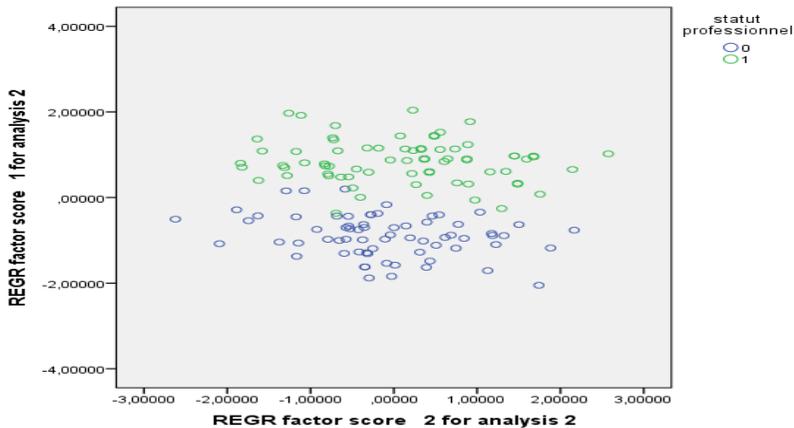
figure 4: plot of goal attainment dimension components in the space after rotation

the statistical analysis for factor score between each professional group for the dimension goal attainment function, as well as the plot provide us the following results stated in the table and graph below:

- the group of practitioners didn't pay consideration to the effectiveness and efficiency of the hospital. Cost containments for them, are not important, whilst the managers emphasize more on this point.
- Practitioners emphasis more on health outcome and databases to evaluate and track performance of their work
- The t test shows that for the health outcome factor and the development of data base is not only the matter of practitioners but also for managers, no difference between these two groups

Professional status	Factor 1	Factor 2
0 : Practitioners            N	68 -,8624703 ,49851626	68 ,0530633 1,10371794
1 : Managers                    N	72 ,8145553 ,58134253	72 -,0501153 ,89606927
Total                        N	140	140
<b>P value for t test</b>	<b>0.000</b>	<b>0.605&gt;0.05</b>
<b>Conclusion</b>	<b>Difference between groups</b>	<b>No difference between groups</b>

**Table 7: Descriptive statistics and T test of factorial scores for goal attainment dimension between professional groups**



**figure 5: Scatter plot of distribution between factors in goal attainment dimension**

### **5.2.3 Dimension of service Production :**

This dimension presents the definition of performance according to the productivity of the institution, volume of activity, the coordination of production factors and the quality of health care and services delivered. An PCA procedure had been undertaken to limit the set of variables (11) underlying this dimension. Four factors are deduced from this method, (see table 9 below)

- ✓ The first factor concern the **humanitarian characteristic** in the provision of service, the excellent care from the technical point of view and the number of emergency rooms, all these variables correspond to the humanitarian aspect of healthcare service insofar it takes into consideration the patient dignity and rights. This factor explains 23% of the total variance.
- ✓ The second factor is about the coordination among professionals and coordination between clinical staff and logistics staff and which leads to improve the quality of healthcare service in term of coordination and collaboration. This factor emphasizes on the **degree of coordination in the hospital**

- ✓ Third factor deals with the development of ambulatory services and the importance to coordinate between the care units.
- ✓ The fourth factor treats **the access of healthcare services** designed in term of range of services required and the easiness to access to them.

A descriptive statistics analysis had been undertaken to the distribution of factorial note for each individual. A difference between the two professional groups in mean, standard deviation could stress the importance of each factor and its perception.

**Rotated Component Matrix<sup>a</sup>**

	Component			
	1	2	3	4
length of stay is low compared to other similar hospitals	-,827	,055	-,006	-,007
increased the range of services offered	,229	,149	,059	,525
large number of emergency room admissions	,688	-,058	,165	,143
Developed his ambulatory services	-,007	-,063	,905	-,020
high degree of coordination between clinical staff and logistics staff	,051	,702	-,057	,226
great coordination among professionals	-,108	,738	,086	-,053
great coordination between care units	,347	,365	,486	,113
constantly trying to improve the quality of care	-,124	,416	-,247	-,597
humanitarian character in the provision of service	,808	-,086	-,029	,145
services easily accessible to those who need them	-,287	,205	-,208	,653
excellent care from a technical point of view	,704	,114	,074	-,137

**Table 8: Distribution of service production items between factors**

The descriptive statistics of the factorial scores distribution for this dimension between professional groups (table 10) show the following results:

- The comparison of factor scores reveals important differences of opinion. This divergence is more observed according to occupational

groups. The ranking according to the weight given to each factor is almost reversed. In fact, the group of practitioners focus more on the humanitarian aspect of healthcare production service (fac 1) with mean of 0.891 and on the ambulatory service (fac4) with mean of 0.175

- in the other side of manager; the importance of each factor is totally divergent, the importance weight of the humanitarian aspect of health care production (fac 1) is reversed if we compare it with practitioners, the mean factorial score for this factor is - 0.842, they focus more on the coordination aspect with a score of -0.05 but with a high standard deviation (1.07), their attitude towards this factor vary between them.
- The t test confirm the difference between professional groups towards factors related to humanitarian aspect of health as well as the access to healthcare service. But in the other side, the t test reveals that the two groups have the same perception towards the professional coordination and quality of healthcare adding to the importance of ambulatory services in improving the performance of district hospital.

		Humanitari an aspect	Professional coordination and quality	Ambulatory services and tech coord	Access to healthcare services
<b>Practitioner s</b>	<b>Mean</b>	0.8916500	0.0533573	0.0750922	0.1753842
	<b>Std</b>	0.5048282	0.91833978	0.9827867	0.9570010
<b>Managers</b>	<b>Mean</b>	-0.842113	-0.0503930	-0.070920	-0.165640
	<b>Std</b>	0.4864796	1.07554576	1.0177381	1.0179437
P value for t test		0.000	0.541>0.05	0.39>0.05	0.043
Conclusion		<b>Difference between groups</b>	<b>Similarity between groups</b>	<b>Similarity between groups</b>	<b>Difference between groups</b>

**Table 9: DESCRIPTIVE statistics and t test of factorial scores for service production dimension between professional groups**

#### ***5.2.4 Culture and value maintaining dimension :***

This function produces and reproduces the system of human and professional values that simultaneously supports and constrains the other three functions. The performance of the hospital must absolutely integrate this essential aspect to the good of organizational functioning.

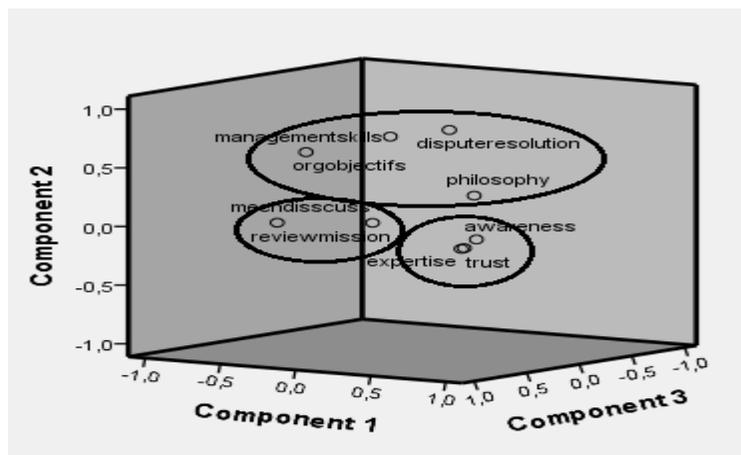
This function includes 9 items, the correlation matrix between them as well as the quality of representation from extraction show that the first one (reviews and updates its mission and objectives) should be deleted because it has a weak correlation with other items and the PCA can extract only 30% of observations which cannot give a significant result to the analysis.

Through the PCA method, three factors have been demonstrated (tableau 11):

- The first one concerns **the personal motivation issue** essential to improve the organizational climate in the hospital. It includes the staff member awareness of their work importance, the feeling that they have necessary expertise to deal with their job and the sense of trust among them.
- The second one is about **the organizational issue** and the management skills which have to be improved adding to the integration of organizational objectives by every one of staff members. This factor also includes the establishment of formal dispute resolution channels.
- The third one is related to **the organizational culture** to review and update the objectives and mission of the organization.

Rotated Component Matrix <sup>a</sup>			
	Component		
	1	2	3
reviews and updates its missions and objectives	,174	,091	,627
philosophy of care is common to all staff members	,001	,130	-,586
organizational objectives have been integrated by everyone	-,544	,564	,234
formal mechanisms to discuss and resolve ethical issues	-,693	-,043	,295
staff members feel they have the necessary expertise	,619	-,114	,390
opportunity to improve their management skills	-,134	,708	,020
create a sense of trust among staff members	,596	-,123	,385
staff members are aware of the importance of their work	,680	-,038	,363
formal dispute resolution channels have been established	,100	,755	-,208
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization. <sup>a</sup>			
a. Rotation converged in 8 iterations.			

**Table 10: Distribution of culture and organizational items between factors**



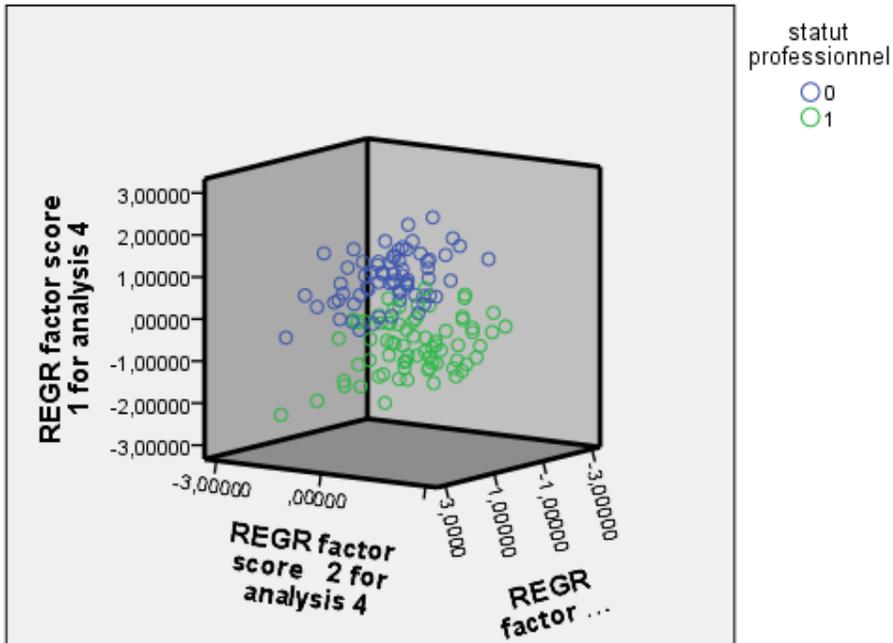
***Figure 6: plot of culture and organizational dimension components in the space after rotation***

The distributions of factorial scores between professional groups (graph 2) as well as the descriptive statistics of this distribution (table 12) highlight the following results

- Practitioners emphasis more on the first factor related to personal motivation with a mean of 0.677 inversely to managers (-0.640) who pay no heed to this aspect;
- Managers emphasize more on the organizational issue and the improvement of management skills for their work (0.178), but the variation for this factor is important (Std= 1.054) which means that perceptions are not common between the individuals of this group. In the other side, this factor is not important for practitioners (-0.189)
- From the third factor we can deduce that practitioners strive to built social cohesion between staff members and seeks for consensus between them through formal mechanisms to discuss and resolve problem related to ethical issue (0.441)
- The t test confirm the difference of perception between these two professional groups

Professional status		Personal motivation issue	Organizational issue	Organizational culture to change
Practitioners	N	68	68	68
	Mean	,6777182	-,1890716	,4413056
	Std. Deviation	,70080016	,90911710	,90002995
Managers	N	72	72	72
	Mean	-,6400672	,1785677	-,4167886
	Std. Deviation	,79933929	1,05415488	,91139909
<b>P value for t test</b>		<b>0.000</b>	<b>0.029</b>	<b>0.000</b>
<b>Decision</b>		<b>Reject H0</b>	<b>Reject H0</b>	<b>Reject H0</b>
<b>Conclusion</b>		<b>There is difference between groups towards this dimension</b>		

**Table 12: descriptive statistics and t test of factorial scores for culture and value maintaining dimension between professional groups**



**Figure 7: Scatter plot of professional actors distribution between factors in dimension 4**

### ***5.2.5 Dimension of alignments between factors :***

To examine the equilibrium between four dimensions aforementioned, we proceed to the PCA for all the six alignments in order to deduce which one should be considered first to define performance according to the perceptions of the two different groups of actors (Managers and Practitioners).

This function includes 11 items representing the six dimensions of Sicotte et al Model (strategic, Allocation, tactical, operational, legitimization and contextual). The correlation matrix between them as well as the quality of representation from extraction shows that all items show significant values in terms of the t value and the percentage of extraction.

Through the PCA method with 4 iterations of varimax rotation, three factors have been deduced (tableau 13):

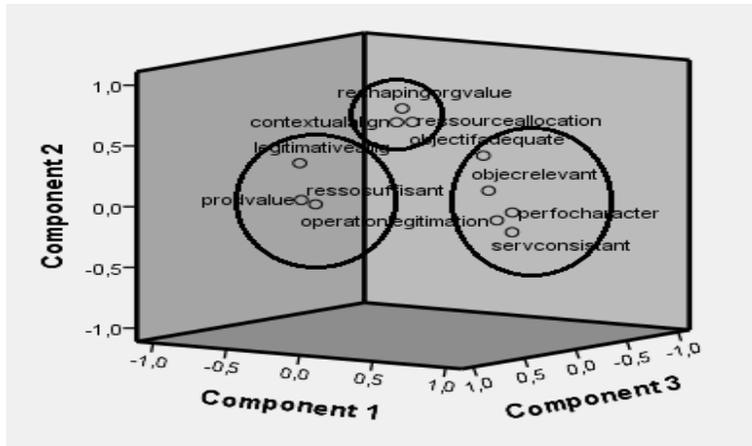
	Component		
	1	2	3
resource allocation is appropriate with the targeted objectives	,042	,717	,137
objectives are adequate with the needs of the population	,535	,454	,180
choice of objectives is relevant with available resources	,202	,547	,292
resources are sufficient to improve the quality of care delivered	,022	,073	,908
service provided is consistent with the needs of the population	,758	,101	,045
production performance process characteristics adequate to goal attainment	,551	,045	,149
the production system congruent with organizational values	,712	,046	,112
production system conducive to encourage fundamental values	,688	,080	,065
organizational goals (or reorientation of strategies) congruent with organizational values	,568	,188	,386
the organizational changes / restructuration congruent with organizational values rationality	,085	,659	,156
the availability of resources, shifts in population needs new social trends reshaping org values	,370	,547	,061

**Table 13 : Distribution of alignments items between Factors**

- The first factor considered the most important emphasizes more on **the population needs in term of objectives setting**, health care delivery and this perception is integrated into the organizational values of the hospital. Taken into account the population needs is treated as a pillar of performance with the organizational values, morals ethics which impact on the production process (*question: production system congruent with organizational values*).
- The second factor gathers **the strategic alignment and the contextual alignment**. These two kind of alignment stipulated in the Sicotte et al model seems to be convergent in the sense that the hospital should adequately allocate resources with targeted goal and at the same time “to transform itself to keep up with changes in the environment. So this factor emphasizes on the environment changes and its impact on objectives setting

- The third variable focus more on **the allocation alignment** in term of quality of service delivered.

The graph below visualizes the distribution of variables between the three factors aforementioned.



**Figure 8: plot of alignments dimension components in the space after rotation**

In order to detect the differences of perception of performance between the professional groups for the alignments dimension the table 14 summarizes the following findings through the descriptive statistics of score notes accorded to each responder to factor assigned. The same approach followed for the four dimensions had been adopted for the alignments dimension. And the results seem to be the same because they show a contradictory perception towards this dimension.

- Managers emphasize more on the first factor related to the population needs in term of objectives setting the means is 0.808 with a standard deviation too low 0.06 and with a kurtosis value acceptable 0.303, which means the perception towards this dimension is common to all. This result also coincides with the findings from the first dimension which highlights the importance of the capacity to acquire resources to improve the population s' image or reputation of the hospital.

- Practitioners focus more on the second factor (mean= 0.126) related to the strategic alignment with the interaction between the adaptation function and the goal setting in one side, and the contextual alignment necessary to integrate the cultural dimension to adapt to the environment and organizational changes. These results accord to the results of dimension of culture and organizational. But the t test for examine the difference between these two groups shows a consensus between them for this factor

Professional Statuts		Population needs in term of objectives	Strategic and contextual alignment	Allocation alignment
Practitioners	Mean	-,8564894	,1264753	-,0423971
	Std	,54886201	,72679663	,93965569
Managers	Mean	,8089066	-,1194488	,0400417
	Std	,55438707	1,19561017	1,05886260
T test	P value	0.000	0.142	0.628
	Decision	<b>Reject H0</b>	<b>Confirm H0</b>	<b>Confirm H0</b>
	Conclusion	<b>Difference between groups</b>	<b>No difference between groups</b>	<b>No difference between groups</b>

**Table 14: descriptive statistics and t test of factorial scores for alignment dimension between professional groups**

### **5.3 Summary of findings from quantitative approach:**

The quantitative approach highlights the conceptions found among the members of the management team and practitioners in the context of district hospital. There are clear differences between perceptions. Table 15 summarizes the different conceptions that were identified during the research according to the theoretical framework of Sicotte et al with the five dimensions defined before

<i>Perception</i>	<i>Managers</i>	<i>Practitioners</i>
Dimension 1: Adaptation to the environment	<ul style="list-style-type: none"> <li>• Service highly valued by the public</li> <li>• Works within the limits of its budget</li> <li>• Treats more patients than other neighborhood hospitals</li> <li>• Informing population of changes</li> </ul>	<ul style="list-style-type: none"> <li>• Collaboration with other institutions</li> <li>• Managed to get a substantial increase in his budget</li> <li>• Adapt its activities in response to the need of the population</li> </ul>
Dimension 2: Goal Attainment	<ul style="list-style-type: none"> <li>• Allocate budget</li> <li>• Reduce cost</li> <li>• Patient satisfaction</li> <li>• Health outcome</li> <li>• Track performance</li> </ul>	<ul style="list-style-type: none"> <li>• Health outcome</li> <li>• Track performance</li> </ul>
Dimension 3: Production service	<ul style="list-style-type: none"> <li>• Degree of Coordination</li> <li>• Quality of healthcare Ambulatory services</li> </ul>	<ul style="list-style-type: none"> <li>• Humanitarian characteristic</li> <li>• Degree of Coordination</li> <li>• Quality of healthcare</li> <li>• Ambulatory services</li> </ul>
Dimension 4: Culture and value maintaining	<ul style="list-style-type: none"> <li>• organizational objectives have been integrated by everyone</li> <li>• opportunity to improve their management skills</li> <li>• formal dispute resolution channels have been established</li> </ul>	<ul style="list-style-type: none"> <li>• staff members feel they have the necessary expertise</li> <li>• create a sense of trust among staff members</li> <li>• staff members are aware of the importance of their work</li> </ul>
Alignments between dimensions	<ul style="list-style-type: none"> <li>• service provided is consistent with the needs of the population</li> <li>• production performance process characteristics adequate to goal attainment</li> <li>• objectives are adequate with the</li> </ul>	<ul style="list-style-type: none"> <li>• resource allocation is appropriate with the targeted objectives</li> <li>• choice of objectives is relevant with available resources</li> <li>• the organizational changes / restructuration congruent with organizational values rationality</li> </ul>

	needs of the population <ul style="list-style-type: none"> <li>• resource allocation is appropriate with the targeted objectives</li> <li>• choice of objectives is relevant with available resources</li> <li>• the organizational changes / restructuration congruent with organizational values</li> </ul>	<ul style="list-style-type: none"> <li>• the availability of resources, shifts in population needs new social trends reshaping org values</li> </ul>
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## 5.4 Findings from semi structured interviews : Qualitative approach

After conducting the questionnaire for different respondents, and according to the results of data analysis, a semi structured telephone interviews is addressed to a limited number of managers (4) and practitioners (4) from different regions of the country in order to understand the reasons behind these divergence in perception of performance between professional groups.

An interview guide was built using the different aspects of results deduced from the quantitative results. This guide has been adapted to members of the management team and practitioners to reflect the particularities of each of the two target groups. We try to ask questions not directly related to these results but related to the performance concept with links to the findings of the quantitative study.

Theme	Questions addressed to Managers/practitioners	Results to explain
Definition of performance	What do you think about drawing up a model to measure the performance of your organization? Why do you think is important	Divergence in perception of the overall concept and the adaptation to the environment dimension

Performance indicators	How do you conceive the performance model suitable for your organization, what kind of indicators do you prefer to integrate, and why?	The goal attainment and production services
Utilization of performance model	Once designed, how do you raise awareness of other professional to adhere and utilize this model?	The culture and the organizational value, social cohesion
Appropriation of performance model	What do you think of its appropriation by the staff?	Strategic alignment and contextual alignment (organizational changes and organizational values)
Involvement	What do you think about the degree of involvement of the staff of your organization in the implementation and appropriation of model?	The social cohesion, production service dimension
Obstacles	According to your opinion what are the main obstacles that impede the implementation of this initiative. Why?	

**Table 15: the interview guide to explain the qualitative results**

#### **5.4.1 Data Collection:**

Data collected through interviews were transcribed and processed using content analysis. We proceed to a systematic comparative analysis of the data. The analysis consists in comparing the results of the interviews between the two groups of actors. To do this, we have developed a table of data summarizing the main items of this interview and comparing the main verbatim. The following table synthesizes the qualitative results (Table 16)

Theme	Dimension	Verbatim of Managers	Verbatim of Practitioners
Definition of performance	Adaptation to the environment	- <i>"The performance model can be useful to monitor our budgets and our expenditures"</i>	<i>"We're not used to measuring performance, it's done by the unit of statistics "</i>

		<p>- “A performance model common to all hospitals can give us ideas about activities of other hospitals”, comparisons can be done, and improvement can be adopted”</p> <p>- “Many people do not understand the operation and comfort of the hospital. They often believe that it is a Private clinic. It is important to communicate with the population about quality, cost and comfort”</p>	<p>→ <b>socio demographic data are considered crucial to draw up a performance model</b></p> <p>“we cannot talk about public health performance unless the organization has a special services provided”.</p>
Performance indicators	Goal attainment dimension and production services dimension	<p>“We cannot be performant without respecting the limits of our financial resources and regulatory measures of budget allocation”</p> <p>“the patient satisfaction is a primordial indicator to measure the performance of the hospital because it is not only focused on service provided to patient by it encompass a community centered orientation”</p>	<p>“humanitarian service delivery means providing the patient a descent place to get the service, to be diagnosed, providing him the accurate treatment and medication”</p>
Utilization of performance model	culture and organizational value,	<p>“ without consensus between all staff about objectives of the hospital and its mission we cannot implement a performance model”</p>	<p>“ Performance model is not a control tool on the hands of Managers, Hospital is a public service</p>

		<p><i>“The performance model requires a minimum level of skills mainly in managerial one to be able to implement it effectively”.</i></p> <p><i>“Administrative skills are crucial to monitor and follow the up-to-date regulations and measures imposed by the ministry”</i></p>	<p><i>with social vocation, Managers have to take into consideration this point and to trust us for the interest of our humanitarian job”</i></p> <p><i>“Doctors feel demotivated, marginalized because job conditions are not like expected and do not rise to the level to talk about performance”</i></p> <p><i>“The degree of consciousness among all medical staff inspite these conditions must be enhanced and boosted”.</i></p>
Appropriation of performance model	Strategic alignment and contextual alignment	<p><i>“Actually even the model had been designed; we have to get <b>the approval from the ministry</b> to apply it. The Ministry has its own perception of indicators we have to comply and tone with”</i></p>	<p><i>“Sometimes we have to adopt some practices and procedures that are not necessarily compatible with performance criteria fixed but that allow us to gain support and legitimacy in the social context. some adjustments between formal structure and the reel activity</i></p>

			<i>should be taken into account”</i>
Involvement of staff members	Production service dimension and Organizational value	<p><i>“ we cannot be involved in the medical activities, we have neither knowledge nor the acceptance of medical staff to discuss with them some issue related to performance”</i></p> <p><i>“We discuss with them their needs their requirements that’s it”</i></p>	<p><i>“ we have to defend our position inside the hospital in term of decision making”</i></p> <p>-</p>
Obstacles		<p>- <i>“...reluctant mentalities to changes and implementation of new kind of indicators...we have already struggled to manage how to deal with the existent indicators because practitioners didn’t accept to give us the reel data about their practices”</i></p> <p>- <i>the hospital is the only type of company where practitioners are almost beyond the authority of the general manager, How do you expect them, in this case, to respect the objectives of the organization? That they comply with budget limits? They try to identify sources of inefficiency...?</i></p>	<p>- <i>“...Doctors suffer from the cumbersome volume of work because of specialized human resources shortage”, “they didn’t find time to attend to the monthly meeting with colleagues to discuss their activities and problems...”</i></p> <p><i>"If you want to be a good team player, I need to have the resources that are needed, because I cannot ask, I need ten people to take care of the number of people I have there, well if I have six to take care of it I will not be able to have the same level of performance.</i></p>

			<p>- “ the ministry lacks the <b>visibility to implement this initiative</b>, because it required negotiations and discussions between all actors, and this can create conflicts that cannot be arbitrated technically”</p> <p>- “<b>definition of roles and attributions between doctors is not clear</b>, the role is often focused only on its scope of activity and is not open to the overall product provided to the patient within the framework of an institutional objective. each actor could hardly identifies the importance of his contribution to the care process”</p>
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**Table 16: results of interviews**

**5.4.2 Contextual elements:**

The contextual elements concerning the organization are treated in this section in order to situate the comments of the participants in their context. These contextual elements provide a backdrop to data collected during the

interviews. They include the organizational structure of performance in one side and the specificities of district hospital in the other side

#### *5.4.2.1 Organizational structure of performance*

We try to describe the organizational structure of performance management existent in the hospital in accordance to the regulations (decree n°2000-2828 of organization of district health units).

There is a technical committee within the hospital. The main mission of this committee is to meet the needs of the organization with respect to quality, safety and performance evaluation. This unit collects and analyzes clinical information such as, for example, lengths of stay and data on incidents and accidents. Among her attributions, the technical committee evaluates human and material resources required to implement actions and schedule activities according to available resources. At the time of the interviews, the committee was not very functional. Its members have not met for several months to focus on other priorities despite the fact that article 23 of the decree aforementioned stipulate that technical committee has to be hold once every trimester to discuss the main issues related to hospital activities.

#### *5.4.2.2 Specificities of district hospital according to interviewers*

All participants interviewed discussed the district hospital as a distinct environment from other hospitals. In particular, they mentioned that the district hospital is the gateway to the all healthcare system and that staff must provide adequate-level care at all levels. They characterize the district hospital as being a very unstable, unpredictable environment

*“...Always vigilance, because here, district hospital is the first gateway to demand healthcare service, you must predict, the unexpected. You foresee the*

*unexpected. Because we never know what can happen...*" verbatim of a public Practitioner in the South

According to the participants interviewed, the pressure for performance in district hospitals is crucial. Practitioners (Doctors, nurses, pharmacist) are constantly challenged by the desire to provide high performance care with very limited resources in order to meet the multiple and complex needs of patients, and this has to be in a minimum time mainly in critical situations. The turnover rate of patients is higher than other care units. Most patients stay for only a few hours then be redirected elsewhere (transfer to the regional hospital, or to stay for further examination, or to another center or to their home). The media constantly echo the critical situation of district hospitals. These often host a disproportionate number of patients who far surpass their capacity. The personnel of district hospital are under constant pressure; that of offering high-performance services daily, both to meet the needs of patients and to ensure that the latter is relieved of the pressure. This pressure certainly has implications for doctors. All interviewers mentioned that district hospital doctors have distinctive features of other type of health care units. This difference may be due to the fact that practitioners must provide services that meet high standards of practice while under constant pressure.

*"....In the district hospital it's all or nothing. It's really disorder in order. You keep order always in disorder. And you have to be able to adapt to all situations. You still need a certain profile to work here because it requires a lot there. You have to be able to adapt, to adjust yourself. And restore your priorities. Because you are always restoring your priorities."* verbatim of public Practitioner in the Center west

## Chapter 6 Discussion

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Along this chapter, all results of the study are discussed. The discussion relies on findings and data extracted from the responses of the questionnaire in one side and data from qualitative study based on interviews with different actors concerned of the primary health care field in the other side.

We remained that the main objective of the study is to investigate about the divergences in perception of performance between stakeholders (Managers and Practitioners) of district hospitals in Tunisia; we limit our study only for these two groups, we suppose that practitioners include all the actors involved in health care delivery to patient (Doctors, nurses, pharmacist, and paramedical staff).

The specific objective is to understand the zone of divergence between actors according to dimensions defined previously in the literature review, and to explain the reasons behind these perceptions by undertaking a qualitative approach using interview technique.

So in this chapter we try to analysis the results of each dimension. For each one we explain the perception based on the argumentation deduced from the qualitative approach.

### **6.1 Discussion on the dimensions of performance**

Dimensions of performance defined by Sicotte et al model cannot be universally measured with standard measure because it is based on individual perception of each one. In the questionnaire addressed to managers and chief medical doctors of district hospitals, we ask them to respond to Likert scale questions based on their perceptions, these latter are shaped by the individual background and philosophy as well as their psychologies and predispositions to respond correctly without any constraints.

The PCA technique was very helpful and useful to limit the analysis and focus on the main factors underlying each dimension ( adaptation function, goal attainment function, production function, culture and values maintaining function) for each professional group (practitioners and managers). From factorial scores of each respondent; we distinguish the statistical distribution of defined factors between professional groups. And thus, we extract the main important factors which describe the divergence in perception of public health performance in district hospital in Tunisia.

The results indicate that the empirically evidenced dimensions (the factors) are quite close to the theoretical model with some adjustments of the items within the dimension.

#### ***6.1.1 Dimension of environment adaptation: divergence in orientation between actors***

The PCA analysis highlights two main factors out of three explaining divergence of public health performance between practitioners and managers. In fact, Managers consider for this dimension that performance can be defined according to the capacity of the organization to acquire resources necessary to health care delivery. They emphasize on the respect of budget limit allocated to the hospital as well as taken into consideration the positive opinion and attitude of the public towards the hospital. Informing them of changes happened in the hospital seems to be a way to save the reputation of the organization by responding to the increase in number of patients. Nevertheless, we have to underline the market vision of the hospital in point of fact that increasing the number of patients could increase the revenue of hospital and therefore can cover the expenses and the effective allocation of the budget.

For practitioners they emphasis more on the aspect of adaptation to the needs of population, in term of increasing the capabilities of the hospital to collaborate

with other institutions in order to guarantee the delivery of health care service and track the health care process of patient. Practitioners, in contrary with managers didn't believe in financial aspect of the healthcare services, for them a performant hospital is who managed to get substantial increase in his budget to face the increasing needs of the population regarding drugs, specific diagnostics, medical equipments...According to managers, in the other side, getting a substantial increase of the budget from the ministry of health is a cumbersome administrative workload, it is difficult to demand an additional fund to finance the activity of the hospital, this kind of operations is required only in extreme cases; out of the control of the managers and either the practitioners. In normal activity, the fact that a manager demands an additional fund from the ministry is considered as a failure in management and it hampers the reputation of the manager.

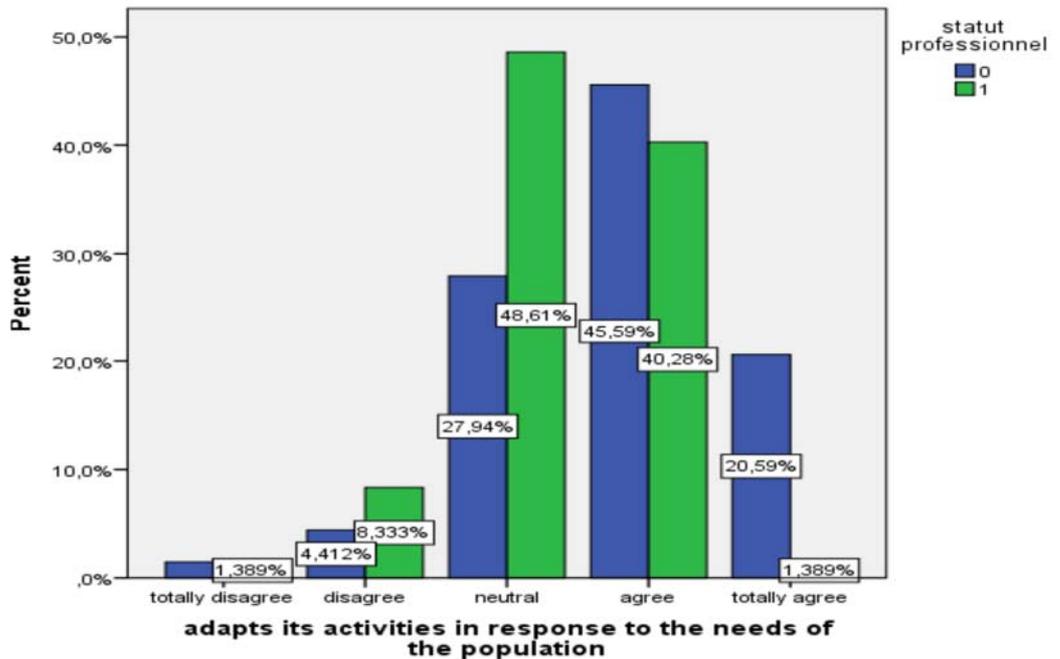
Manager to care of his image and reputation in front of public authorities (locale and central), has to pay attention to the patient satisfaction “...*patient are the capital of the hospital, getting complains from them is seen as a bad reputation of the management and not for the physicians*”

So, it seems that managers have an orientation that is not centered on the hospital and its patients, but much more focused on the community (or society in general) and the relationship between the hospital and the population. Their major concern is to conciliate between the reputation of the hospital and the satisfaction of the population by informing them about the changes incurred while respecting to regulatory constraints in term of resources uses.

However, the orientation for practitioners is rather centered on their own individual activity to serve patient and his need. For them; the adaptation to the environment and the institutional survival ensuing are related only to the adaptation to population changes and needs in terms of epidemiology changes disregarding to resources.

The divergence on perception is basically lies on the difference between orientation of managers and practitioners. We can also deduce from the responses that a minimal convergence and accord is evident only with the responsiveness to population needs. In fact, needs are defined conforming to the perception and attitude of each person. Managers discern needs of population in term of availability of services and resource allocation, but practitioners define needs of population in term of the epidemiological changes, and social habits

The descriptive statistics for this variable is described as below.



***Figure 9 : Bar chart for the variable related to adapts to the population's needs by professional group***

statut professionnel	N	Mean	Std. Deviation
0	68	3,79	,873
1	72	3,32	,709
Total	140	3,55	,825

**Table 17 : Mean of the variable related to «adaptation to the population's needs » between professional group**

According to these two SPSS results we can deduce that the majority of actors agree to the point that the performance of the hospital is related to the adaptation in response to the needs of population. The mean is about 3.79 for practitioners and 3.32 for managers...managers still have this neutral unwillingness towards this variable ( 48.6%) but practitioners seems to put the accent on this variable (66%)

### **6.1.2 Goal attainment: between holistic and biological view**

This dimension as mentioned in the literature review refers to the capacity of the organization to make strategic choices that result in achievement of goals. The findings through PCA show also a divergence in perception of goal attainment between managers and practitioners. In fact, managers consider that a “performant” hospital is the one which allocates the budget effectively between services while reducing cost.

Managers are more interested in patient satisfaction because they have a more "holistic" view of the patient and that expression of satisfaction gives them a feedback and a valuation of their work. From a holistic perspective, what matters most is the sick person before illness herself

In the other side the practitioners put accent on the health outcome as an important indicator to assess the performance of the district hospital. In fact,

health outcome points out whether a given disease process gets better or worse, It focuses not on what is done for patients but what results from what is done. Doctors are more interested in health care outcomes - which is the case - because they have a more "biological" approach to the patient. This approach focuses more on the illness herself regardless the patient and his situation. This perception is caused by the trainings of doctors during their medical studies which are very marked by biomedical approach. Besides the health outcome, practitioners outline the importance to work with other organizations to develop databases to evaluate and track performance. Performance for them is limited to what results for the diagnosis undertaken for patients. Since the district hospital has a shortage of many services and resources for deep diagnosis, the transfer to other hospital mainly the regional one is the only way to guarantee the continuity of healthcare service. The majority of district hospitals complain from the lack of follow up in the medical records of patients. Medical records of patient does not provide the fully historic of medication, doctors found many difficulties in such case and that can affect the quality of service delivered and thus the performance of district hospital. This perception is also shared with managers as the t test demonstrates that there is no difference between the mean of the two groups. This result is even shown through the qualitative research which define the health outcome as a concept including all medical and sociological aspects, as well as the work with other organizations to develop databases to evaluate and track performance is considered as a purely administrative task

### **6.1.3 Service production function : impartiality of managers**

In view of the data collected, the perception of service production function seems to vary according to specific expectations on the part of actors.

In fact, for managers we observe that their perceptions towards this function is neutral, they didn't expect any things to define the performance. The verbatim collected in this regard have thus echoed that managers couldn't neither want be involved in the service production service. It's the duties of practitioners the only one who can judge the performance of service delivery. Also the PCA shows the negative perception of managers towards this dimension; all values are negative compared to those of practitioners. This technical issue is traditionally seen as the sole responsibility of practitioners. The administrative professionals are not included in this issue, and their intervention limits in purchasing the required needs and equipments to practitioners. Their expectations are very high for this dimension as shown in the descriptive analysis for all variables related to this dimension (see Annexes). Out of the 11 variables defined for this dimension 8 variables represent a mean value more than 3, which explain that managers hope for improvement to this dimension based on their own understanding and vision without any knowledge about other conceptualization. These results converge with the t test results which show that managers share the same perception with practitioners in their emphasis on coordination process inside the hospital and the quality of healthcare with the increasing on ambulatory services. The impartiality of managers vis-a-vis this dimension is explained by their holistic vision to save the general interest of the hospital.

In the other side practitioners emphasize more on humanitarian characteristic in the provision of service. The verbatim collected from practitioners clarify the humanitarian characteristic terms of:

- ✓ The infrastructure and organization of the primary care service,
- ✓ Dissatisfaction with the physical structure and equipment of the services
- ✓ The flow of attendance, which can facilitate or make difficult the access.

- ✓ Insufficient number of professionals,
- ✓ Fragmentation of the work processes.

The factor analysis includes also the availability of emergency rooms in the hospital as an important indicator to the performance of healthcare service in district hospital, due to his characteristic as the “first gateway” to health care system to face the unpredictable and unstable environment. Nevertheless, the coordination between units (laboratory, radiology, emergency, pharmacy...) as well as coordination between professionals of healthcare is an important performance factor in healthcare delivery insofar it is expected to be a useful tool for the achievement of the responsiveness to the needs of the population goal as well the integrated care.

They also believe that providing excellent care from a technical point of view is an important indicator of performance in district hospitals. Excellence for practitioners is closely associated with quality. According to their verbatim, excellence refers to the ability to react rapidly and change the paradigm immediately as unpredictable events occur ever more frequently. The traditional perception of excellence of Peters (1982) is still rooted in the mind of practitioners when they define this concept.

We can conclude through this analysis that the concept of performance related to this dimension is conflated with other concept such as quality and excellence.

#### **6.1.4 Culture and value maintaining function: between appeal for integration of organizational objectives and a struggle for social recognition of practitioners**

Like the production dimension, the culture and value maintaining function is seen from the inside in a socio technical system perspective of values and norms according to them the organizational goals are judged (Sicotte et al, 1998). Ethics, professional autonomy, social cohesion contribute all to the performance of the hospital.

The perception of performance regarding this dimension shows also a divergence between practitioners and managers. In fact, according to the results, managers focus more on the organizational values between all members interacting in the hospital, the integration of the organizational objectives by everyone is an important indicator of performance. The integration of common organizational objectives between staff members rejoins the holistic approach of healthcare delivery from which managers inspire their missions. It represents the commitment of all hospital's members to work on respecting of values and principles of healthcare service such as the caring and the compassion, the communication, the competence and the confidentiality. All these principles, articulate, support and contribute to the global vision of the hospital. Moreover, to make sure that these guidelines and principles are embedded in the hospital's staff practice, formal dispute resolution channels need to be established in order to save the practitioners-managers working relationship from deterioration. Managers in this sense, consider that the main important conflicts come from the specific professional group which is "nurses" who strive for their own willingness to be recognized as an organized and autonomous "profession", similar to the medical profession. Nurses want to work cooperatively and on an equal footing with other health professionals. As Stein et al (1990) stipulate as

they “hardly struggle for respectability”; this atmosphere creates misunderstandings and boosts this kind of interpersonal conflict between professionals. Therefore, the organization of work within each care unit as well as the definition of role for each actor intervening in the healthcare process is considered as the central pillar to establish a formal dispute resolution channels. “ *performance means that everyone is aware of his responsibilities, the overlapping in definition of role leads to dispute and troubles especially starting from nurses*” a director of district hospital Beja.

The interviews undertaken with directors of hospitals unveil their involvement to improve their management skills in order to align to the specific context of healthcare management. They stressed that their academic previous background did not deal with healthcare structures, the diversity of actors with different needs and attitudes as well as the particularity of healthcare sector necessitate an updating and adjustment of their knowledge and administrative skills through specific professional trainings.

“... *we need an overall understanding of health care management to talk about performance...basic knowledge in community medicine seems to be crucial to tackle effectively a health care structure and to find the right path to carry out all regulations and administrative constraints imposed*” director of district hospital in the south.

Out of the logic of managers, for this dimension, practitioners insist on the social cohesion inside the hospital and their social recognition among all actors. Indeed, they have a vision focused on their individual activity in terms of expertise and awareness of the importance of their work in the organization. This vision is often limited to the medical field and it is not open to the overall product provided to the patient within the framework of an institutional objective. So the doctor recognizes little or no other actors who will position themselves in response to medical power. We could also explain the concern

for social recognition on the part of physicians by their desire to be recognized as an influential player in central government decisions and to be taken into consideration. As mentioned by a doctor; ““ *Performance model is not a control tool on the hands of Managers, Hospital is a public service with social vocation, Managers have to take into consideration this point and to trust us for the interest of our humanitarian job*”

A feeling of marginalization and underestimation prevailed in the mindset of all practitioners mainly doctors. The fact that they are working in district hospitals, with very weak means of board and making daily consultations which did not rise to the level of a prestigious profession, makes them unmotivated and deprecated

*“Doctors feel unmotivated, marginalized because job conditions are not like expected and do not rise to the level to talk about performance”* said a doctor working in district hospital.

In order to overcome this situation and make their job more valuable, practitioners need to be involved in many administrative decisions that have a direct influence on their daily duties and performance. It should be noted, however, that the prestige of physicians is eroding and their power is being called into questioning (Aasland, 2001) by other professionals, especially managers and political and public authorities, who are increasingly trying to influence medical practices by linking them to other consideration related to the use of resources and revenues. This awareness of the importance of their work triggers on them a challenge of defense positioning within the hospital. Talking about involvement of staff member in designing a performance model to assess the performance of the overall hospital, practitioners and mainly physicians respond *“we have **to defend** our position inside the hospital in term of decision making, imposing a performance model based on economic and financial indicators might undermine our profession”*.

Perceptions towards this dimension seem to be very sharp between the two professional groups because they hide behind a very deep misunderstanding from a cultural anchor rooted in past. This divergence would disrupt a unified definition of performance between actors.

These findings are supported by the system of professions theory of Abbott (1988), according to him the professions are fundamentally competing systems of action. Each profession aims to maintain and expand its field of authority and recognition. In this context, it is not surprising that the vision of the performance is different between professional groups.

#### ***6.1.5 The alignments between dimensions: confirmation of findings***

As noticed by Sicotte et al (1998), the interchanges between the four dimensions allow discussing the contingent relations between them and in turn affecting the overall performance of the hospital.

The findings from the quantitative analysis show that managers emphasize more on the strategic, allocation and tactical alignment in the side of the satisfaction of the population needs. These results converge with what concluded about the holistic vision of managers towards patients. Concerning the strategic alignment, according to the authors, the link between adaptation dimension and production service dimension focuses on the ability of the hospital to maximize the use of resources to produce the best services for the population. Managers regarding this alignment couldn't assert their opinion about the use of resources optimally to produce an effective service. In fact, managers didn't express any perspective towards the production service dimension but they point some links with goals of the hospital on the one hand and with organizational values on the other hand. This stand point of managers, despite it shows an imbalance between dimensions, it highlights behind it future expectations to be involved positively in improving the performance of

production service Concerning the practitioners, they emphasize more on the strategic alignment and the contextual alignment. This latter, and according to the authors, the health care organization should transform itself to “*keep up with changes in the environment*” while taking into account the core organizational values. Practitioners are totally agreed with this alignment, through the interview and discussion undertaken they insist “*Sometimes we have to adopt some practices and procedures that are not necessarily compatible with performance criteria fixed but that allow us to gain support and legitimacy in the social context. Some adjustments between formal structure and the reel activity should be taken into account*”.(verbatim of a district chef doctor in the region of the North. What we notice is that our respondents in the public hospital attach great importance on organizational values like the gain of support and legitimacy in the social context, and to organizational climate which according to some discussions with practitioners is considered as the starting point for any dimension of hospital performance and will open opportunities for all professional groups, to adapt to the environment within the limits of the common values of the profession. Here, practitioners put their attention on the necessity to make some adjustment and recognize the limit of interventions of each actor. These findings align with what has been found in the dimension related to the culture and organizational values.

So, we can conclude that the interchanges between these four dimensions as stipulated by the model of Sicotte et al (1998) define the right equilibrium on the hospital’s performance. In fact, for managers who endeavor to interfere in the production services by monitoring some indicators and understanding some issues, they emphasize in all alignments where this function is involved. The same thing is for Practitioners who feel that their social recognition is biased and their intervention in the main decision making in the central level is

marginalized, that's why they try to emphasize in alignments where their intervention is minimal.

## **6.2 Obstacles of designing a performance model for district hospitals in Tunisia:**

In the light of what has been advanced in the discussion section concerning the divergent perceptions of performance dimensions between the different actors and the alignments they focus on, we can identify the difficulties and obstacles that explain this phenomenon in the district hospitals in Tunisia. Designing a performance model taken into consideration all these attitudes is a difficult task because decision makers have to solve the problems of perception gap between all stakeholders interfering in healthcare process. These problems can be summarized as the following:

### ***6.2.1 Shortage of Medical staff:***

As mentioned by practitioners during the interviews, “...*Doctors suffer from the cumbersome volume of work because of shortage in specialized human resources*”, “*they didn't find time to attend the monthly meeting with colleagues to discuss their activities and problems...*”

According to the sayings and the statistics of the Tunisian's ministry of health, medical doctor's density is inequitably distributed and is lower in poorer area. This situation leads to an increasing in disparity of the ratio number of inhabitants per doctor. Statistics show that the number of inhabitants per physician in the public sector is very high in Central West (2591)<sup>17</sup> and the northeastern region (2851), but it is low in the Grand Tunis and the centre east where the density of physicians respectively is very high (1492, 1441). With

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<sup>17</sup> *Sanitary Map 2015, Ministry of Health of Tunisia, Department of studies and planification, juin 2016*

the increasing of the population number and the increasing of number of prescriptions and consultations (almost 4.97 millions consultations and 7910 deliveries in 2016); physicians become unable to deliver adequate healthcare service and focus on understanding the patient on his biopsychosocial globality. Adding to that the disparity in distribution of materials and equipments between university hospitals, regional hospitals, and district hospitals deepen the phenomena of disinterest and unconcern in practitioners and mainly physicians. Doctors practicing in the interior regions in district hospitals are living concretely the "*misery of Tunisian medicine*" as mentioned by the majority of physicians interviewed they introduce this kind of motto because they felt forgotten, even denigrated and used. For that, practitioners feel unmotivated to involve with other actors to think and discuss about defining performance and set up a practical framework because of dearth of time. Their major concern is only to finish their work and deliver a healthcare service while respecting the required quality standards.

### ***6.2.2 Lack of strategic planning and management in District***

#### ***Hospital:***

In addition to the shortage of human resources particularly specialized physicians, public district hospital in Tunisia are struggling with the lack of internal strategic planning and management for delivery of effective primary healthcare services. This obstacle is concretized by an excessive and disempowering centralization by the ministry of health, denounced unanimously by all managers interviewed; in particular, the modalities (de facto more than of right) of allocation of hospital staff and overall resource management in hospitals deprives directors of their logical prerogatives and leads to an inefficient control of the central administration in the operation of hospital services. Nevertheless, The Tunisian budget system ensures the

regularity of the expenditure, but being oriented towards the control of means, it is insufficient to ensure efficiency of resource allocation and contribute to operational performance. In fact, managers underline that while the hospital teams (managers and practitioners) have produced a reflection, often thorough, on their medium-term objectives (establishment project), this work was carried out without a priori budgetary constraint; the quantification of the required means has generally remained much more imprecise; this preparation has thus been able to arouse many expectations in the establishments, quickly disappointed by the reality and the hard constraint of the means come to impose later by the central administration. Moreover, physicians affirm that healthcare services in district hospital are not in line with clinical requirements of non-communicable diseases and long-term treatment whereof it does not meet the needs of large proportion of the population mainly with the epidemiological changes occurred in the societies as well as the uncertainty of healthcare demand.

So, the management of district hospital faces many constraints imposed by the central administration of ministry who dictates instructions without any negotiation with other responsible in regional level. This situation leads to a marginalization of managers and practitioners initiatives and involvement to improve the performance of overall hospital.

### ***6.2.3 Communication gap and information asymmetry between***

#### ***actors:***

The communication gap between the hospital and the ministry is caused by a lack of dialogue particularly as a part of the annual budget preparation. This

lack of dialogue is also within the hospitals care services or between them and the hospital management.

This communication gap between the central administration of the ministry leads to misunderstandings and unfulfilled expectations. The distribution of equipments by the ministry is based essentially on the availability of investment credits in the budget and the programs of allocation of the credit, without any negotiation or discussion concerning the alignment with hospital's objectives or priorities or plan. Even if the management of the district hospital asks for some needs and inquiries to the central administration, this latter doesn't pay no heed. The only reason behind this situation is that district hospitals have not their administrative and financial independence from the ministry of health which finance the totality of their budget unlike the regional or the university hospital which have other sources of funding from the health insurance.

Nevertheless, the communication gap is observed also between physicians and healthcare managers, because of professional culture gap which has existed since many years. In fact, physicians consider the role of manager only in term of achieving a financial solid bottom line. A kind of conflict rise and has cultivated adversarial feelings between these two groups of actors.

Everyone feels as though the other has no right and legitimacy to intervene in its profession on any matter. This observation aligns with the findings of Rundall, Davies, & Hodges, 2004 with their study on relationship between managers and doctors in the United States and United Kingdom. The common attitude of managers towards the physicians is that "*they are arrogant and they can do what they want*", "*they lack knowledge of the overall system... they don't care about budget and financial resources...*". Physicians are the most important actors as change agents within organization, and they have more power. But in the other side Physicians see managers as the only decision makers in the hospitals because they handle everything by the axiom "*No*

*money to give, no reserves in the budget... waiting for the next year". This axiom is understood as a retort against the pretended criticism to managers and their misunderstanding.*

*The hospital is the only type of organization **where practitioners are almost beyond the authority of the general manager**, How do you expect them, in this case, to respect the objectives of the organization? That they comply with budget limits, they try to identify sources of inefficiency...?*

To deal with this situation, the managers are supposed to try to obtain the maximum of resources so as not to have to undergo conflicts that they cannot handle technically. The ministry, in turn, placed in a similar situation of lack of visibility, will have a similar attitude. In the same flow of idea, physician and practitioners, whatever their profession, are supposed to have to recognize the economic performance criteria and not neglect their importance in defining the overall performance of the hospital.

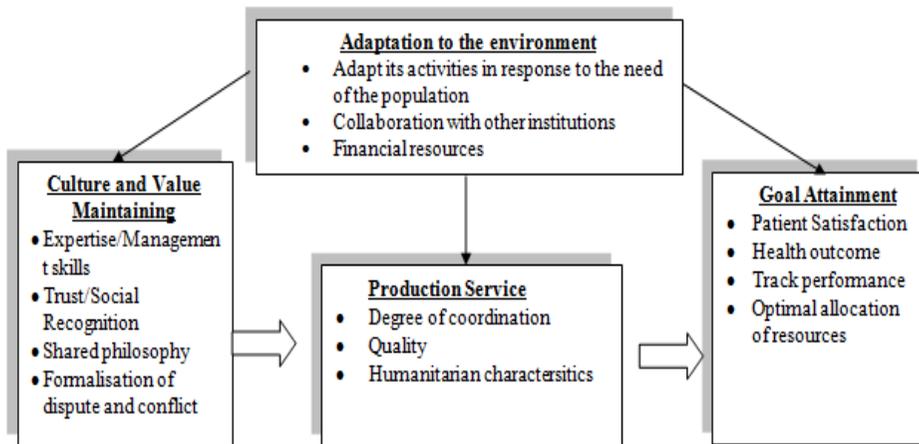
### **6.3 Towards an integrative model of performance**

The search of efficiency and performance in district hospital brings professionals to work together to improve the overall organizational processes. This refers to the hospital's governance that should lead managers and health professionals to work on some common initiatives to improve the performance. It involves a synergy between the management system (members of the management team) and the clinical system (practitioners) (Brault et al., 2008). This important synergy between the two groups of actors demonstrates the importance of establishing a common model of performance management.

The results of this study show that the two groups of participants' present divergent perception of performance in the four dimensions defined previously. An integrative model below allows integrating the different conceptions of the two groups of actors. It provides managers with a framework to take into

account both their own visions and those of physicians and practitioners in performance management initiatives.

**Figure 10: Integrative conceptual framework for performance in district Hospital in Tunisia**



According to this graph the main performance indicator relative to the goal attainment dimension is the Patient satisfaction and an optimal allocation of resources, the health outcome in this proposed model includes all these issue in a larger and more holistic conceptualization unlike the biological view of practitioners. The production service process with the emphasis on the coordination between healthcare structures and the respect of the quality standards as well as humanitarian characteristics of health care services should result to the goal attainment. These results must be agreed by the management team in spite of their impartial and neutral attitude towards the performance of this dimension.

The culture and value maintaining should be shared between all professional groups working in the district hospital (manager team and practitioners). This dimension is crucial to make the process of delivery health care service more

efficient and “performant”. Sharing discussions and internalization of knowledge and philosophy between all stakeholders working in this context should be embedded on the daily work of all.

The Sicotte et al model shows its usefulness and effectiveness to define the conception of performance in district hospital in Tunisia. Even though, results from empirical study highlights the divergence and difference in perception and attitude between stakeholders, through the interaction between dimensions, the model can be adopted to envisage a design of a unified model bringing together all views to reach a consensus.

## **Chapter 7 : Conclusion and Recommendations**

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At the end of this work, it is necessary to question the progress made in during the five parts of our thesis, to identify the main contributions, the limits and recommendations as well as the prospects for research.

### **7.1 Conclusion :**

The ultimate goal of this study is to examine the prior perception of public health performance between two groups of actors (Managers and practitioners) in district hospitals in Tunisia. This step is crucial before the design of a performance model because it takes into account the divergences and the consensual zones between views. Results from a quantitative approach using the Sicotte et al model (1998), show that perception towards performance differs totally from managers and practitioners. In fact, from one side, managers emphasize more on the capacity of the hospital to acquire resources (financial, equipments) to respond to the increase in the number of patients, their satisfaction is the main goal for them adding to the respect of limits on budget which is the core efficiency's indicator of their job. Disregarding their impartiality and non interference in production of healthcare services, managers require improving their management skills and integrating the organizational objectives by everyone through a common philosophy of care in order to reinforce consensus on goals and to forge the value system of hospital. In the other side, Practitioners in contrary define the performance in term of adaptation to population needs and the degree of collaboration with other institutions. Their orientation in this context is rather biological focusing on health outcome regardless the patient and his situation and even the financial capabilities of the hospital. They affirm the importance of quality of healthcare

as a performance indicator, as well as the humanitarian aspects of health care delivery.

Because of many problems that face district hospital, and through the qualitative approach undertaken to understand the “why” of such results, practitioners put the accent on the motivation and relational issue related to the sense of trust between members, awareness of their importance in the institution, and social recognition to overcome this feelings of underestimation and marginalization.

This study unveils not only the reality of perception of performance between physicians and management team in district hospital, but also the organizational atmosphere of work within these institutions. The qualitative approach through interviews with different stakeholders seems to be crucial to understand the reasons behind such divergence on perceptions. To understand perceptions of different actors in such context, we have to recognize the hidden facets of this context and decorticate its components in order to deduct objective assumption. Thus, discussing about performance and related topics as resource allocation or strategic choices forces everyone to disclose and legitimize their preferences and expectations. This has the effect of exacerbating cleavages between different professions about performance. Nevertheless, we can conclude that designing a performance model to assess the activities of district hospital in Tunisia should underline the divergence of perceptions between actors and try to unify them through a certain degree of consensus on the role of the hospital as a whole; so that a certain degree of divergence becomes acceptable. The important cleavages that we note in this study highlight the significant challenges that confront hospital management and the management of health care systems.

On the theoretical aspect of the study, our results confirm the position supported by Sicotte et al model (1998) according to him the divergent representations of

performance in the hospital reflect a reconcilable dynamic tension between different groups of actors within a coherent system.

These spaces of freedom specific to each group of actors that we have just outlined offer a sufficient organizational division to allow this minimal integration, to boost the action of the actors towards a common vision which remains the answer to the health needs of individuals and the entire population.

## **7.2 Limitation of the research:**

In order to achieve the goal of this study, we use Parsons' theory and we administered a questionnaire to two groups of internal strategic stakeholders (managers and practitioners) of the Tunisian district hospitals. This initial methodological choice strongly conditions the results of this study. That's why we will discuss the limits of our studies related to this choice and propose alternative approaches in terms of the chosen perspective.

The first limit of the study is that we gather all practitioners in the same group. This choice was justified by the fact that all the interveners in the process of healthcare delivery share the same preoccupations and the district chief doctor knew all their works and tries to present the common perception between them. This limit could hide the real perception of performance among other groups like nurses, pharmacist for example. Managers through the interviews, allude to the problem encountered with nurses as they represent the main group of healthcare employee in term of number. Thus, taken into account this group of stakeholders in the study would show better and more accurate results than those relied on the general attitude of the district chief doctor. Nevertheless, we addressed the internal strategic actors who could, by their decision, influence the strategic orientation of the hospital. However, other choices could have been made concerning group of actors like the staff covering all the hierarchical levels or the strategic actors of the trade union.

The second limit, is related to the sample size, while acceptable (64%), is considered also a limitation of our study. A larger number of respondents per institution would have allowed for inter-institutional comparisons, and explain differences in the perspective of performance. This type of comparison would address the issue of organizational culture and shared values within the organization.

The third limit concerns the aspects of performance, the questionnaire addressed to respondents didn't cover all them. In spite we choose a theoretical model including all dimensions of performance, we considered useful to delete some aspects like learning and innovation, to make the questionnaire understandable and not complicated to complete. Any aspect of the performance omitted when designing the questionnaire will be hidden from the results

### **7.3 Recommendations:**

Based on the study findings, some recommendations can be deduced in order to support decision makers of healthcare policy in resolving the issue of divergence in perceptions between stakeholders in district hospital by shrinking the gap and boosting the unification of view towards a common model to performance measure.

In the managerial perspective, the ministry of health has to interfere to resolve the rejection of management tools and a refusal to use them from practitioners and physicians. That's why taken into account psychological readiness of practitioners to embed such managerial aspects into their mindset to deal with it every day practice is considered as a must. Bridges must be established between different functional units and administrative one, disconnections should disappear and a state of mind to work together should flourish. Training courses addressed to physicians and practitioners on management and

administrative procedures seems to be crucial because they make the information comprehensible to them, and also provide the opportunity to perceive the transversal links with other components of the hospital, whether it is with various categories of staff or with multiple disciplines. As a result, the individual is led to look at management tools essentially as "learning supports" and less as "behavioral tools".

It is therefore necessary to train health care professional on management tools which must be developed with great precision. They can allow managers to self-evaluate and monitor the progress of their activity.

Performance assessment must be in this perspective extremely educational and pedagogical; it must strive to develop means of communicating with the actors (to be understandable to them) and means enabling the actors to communicate with each other.

According to that, Improving dialogue and communication between different stakeholders is considered a major concern to the hospital. The issue of communication is a central issue for the hospital and its evolution towards new organizational models based on the assessment of performance. Communication in its formal and informal (relational) dimensions is the pillar of cooperation and mutual understanding towards a unified model of performance. It is not limited to the transmission of information and the exchange of data: it is above all the meeting of people around a subject on which everyone must be able to express themselves. Not only should the communication inside the hospital be improved but also the communication with the ministry as well, mainly during the budget preparation. Meeting, dialogues and discussion should be planned to guarantee aftermath an effective utilization of the budget and avoid further misunderstandings from practitioners on resources allocation among services.

Concerning the role of manager of the hospital, his role should change to assume the arbitration between the competing internal demands of the different services in his organization instead of simply transmit the demands of physicians to the central administration, leaving the issue on the hands of the Ministry of Health - or even finances – which is often unable to decide because of for lack of information and insufficient justifications of the requests.

Regarding the design of performance model, the difficulty of identifying "good" performance indicators in district hospital runs the risk of being content with an overly restrictive conception of hospital performance imposed by the central administration; this could ultimately weaken the interest of participation and involvement of professionals in the institutions.

Definition of indicators must not divert the hospital from a global management and steering of its activity, according to a broader set of performance criteria.

Moreover, it is necessary to relay on a gradual definition and improvement of these indicators over the years. Therefore, it is recommended that during the first year(s), the indicator corresponding to a given action or performance objective may simply consist of measuring the baseline and not the overall process or the method of collecting the new information required.

### **7.3 Prospects for further research, management and clinical practice:**

As mentioned in the limits of the study, many groups of actors were not considered during this study. Because of performance is a contingent concept (Champagne et al., 2004), this asserts that the performance dimensions privileged by the different groups actors may vary depending on their mutual understanding and shared repertory of practice, objectives, rituals, habits, hence the importance of exploring this aspect in future studies is proposed. In this

regard, it would be useful to deepen the analysis in other studies to better understand how various professional factors affect performance conceptions and approaches to performance management. Many other controlled variables can be taken into account in further research to test the influence in perceiving health performance in district hospitals. These controlled variables can include the seniority in job in district hospital, the belonging to the district zone, the age...

This study instigates some recommendations for the field of research, but also for the field of health management. The integrative model that was developed during this study provides a framework to guide the development of performance measurement tools directly related to healthcare management. These measurement tools could help meet the increased demands for accountability in the area of healthcare services and serve as levers for improving patient health and safety, as well as creating better working conditions for all practitioners.

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## **Appendix**

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### **Questionnaire (English version)**

I would like to thank you for taking a few moments to fill this questionnaire and participate in my research study entitled "Perception of Public Health Performance in District Hospitals in Tunisia: Towards a Unified View between Managers and Practitioners".

Your opinion is very valuable to me and will help me to enrich my research.

This work is carried out as part of my Master's dissertation in "Graduate School of Public Administration- Seoul National University-Korea"

The goal of this study is to delineate the design of the performance of district hospitals as seen by the various actors in the front-line hospitals, namely the ward managers and chiefs of physicians, this is a crucial step for the determination of relevant performance indicators, applicable, and meeting the needs of their users that can be the basis of dashboard.

I want to remind you that this is an anonymous questionnaire and that no information about your identity will not be reflected in the research report or the resulting publications.

Any recommendations or opinions about the questionnaire as well as the overall topic will be really appreciated.

## Questions:

Is “performant”, the hospital that ...? (Please tick the answer for your opinion)

Question number	Items	Strongly disagree	disagree	neutral	agree	Strongly agree
	<b><u>Adaptation function</u></b>					
1	Who has highly qualified staff					
2	collaborating with other institutions to expand its services					
3	who managed to get a substantial increase in his budget					
4	whose services are highly valued by the public					
5	which adapts its activities in response to the needs of the population					
6	which takes into account socio-demographic data					
7	informing the population of changes					
8	that works within the limits of its budget					
9	which treats a large part of the population					
10	who treats many more patients than other neighborhood hospitals					
11	providing services not available elsewhere					

<b><u>Goal attainment function</u></b>						
12	who consistently produces the best health outcomes while controlling costs					
13	that has reduced costs by improving the adequacy of care					
14	who allocates budgets between services on the basis of their relative cost-effectiveness					
15	who works with other organizations to develop databases to evaluate and track performance					
16	where a small percentage of patients with complications					
17	whose patients are very satisfied with the results of care					
<b><u>Service production function</u></b>						
18	whose length of stay is low compared to other similar hospitals					
19	which has increased the range of services offered					
20	who has a large number of emergency room admissions					

21	who has developed his ambulatory services					
22	who has a high degree of coordination between clinical staff and logistics staff					
23	where there is great coordination among professionals					
24	where there is great coordination between care units					
25	who is constantly trying to improve the quality of care					
26	Who takes into consideration the humanitarian character in the provision of service					
27	making its services easily accessible to those who need them					
28	which provides excellent care from a technical point of view					
<b><u>culture and values maintaining function</u></b>						
29	who regularly reviews and updates its missions and objectives					
30	whose philosophy of care is common to all staff members					
31	whose organizational					

	objectives have been integrated by everyone					
32	who has put in place formal mechanisms to discuss and resolve ethical issues					
33	whose staff members feel they have the necessary expertise					
34	which gives managers and members the opportunity to improve their management skills					
35	who is able to create a sense of trust among staff members					
36	whose staff members are aware of the importance of their work					
37	within which formal dispute resolution channels have been established and are being used by staff members					
<b><u>strategic alignment (adaptation &lt;--&gt;goals)</u></b>						
38	Whose resource allocation is appropriate with the targeted objectives					
39	Whose objectives are adequate with the needs of the population					

40	Whose choice of objectives is relevant with available resources					
<b><u>allocation alignment (adaptation ↔ production)</u></b>						
41	Whose resources are sufficient to improve the quality of care delivered					
42	the service provided is consistent with the needs of the population					
<b><u>tactical alignment (goals ↔ production)</u></b>						
43	the production process performance characteristics (volume, quality of care ...) adequate to enhance goal attainment					
<b><u>operational alignment (values ↔ production)</u></b>						
44	the production system congruent with organizational values					
45	the production system conducive to encourage fundamental values					
<b><u>legitimization alignment (values ↔ goals)</u></b>						
46	organizational goals (or reorientation of strategies) congruent with organizational values					

<b><u>contextual alignment (values ↔ adaptation)</u></b>						
47	the organizational changes / restructuration congruent with organizational values rationality					
48	the availability of resources, shifts in population needs and new social trends reshaping the organizational values					

## SPSS RESULTS

- Adaptation to the environment dimension

### Descriptive Statistics

	Mean	Std. Deviation	Analysis N
qualified staff	3,99	,725	140
collaborating with other institutions	3,49	,894	140
managed to get a substantial increase in his budget	3,76	1,017	140
services are highly valued by the public	3,11	1,037	140
adapts its activities in response to the needs of the population	3,55	,825	140
takes into account socio-demographic data	3,50	,869	140
informing the population of changes	3,13	1,124	140
works within the limits of its budget	3,00	1,138	140
treats a large part of the population	2,87	,988	140
treats many more patients than other neighborhood hospitals	3,24	1,118	140
providing services not available elsewhere	2,89	,895	140

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	,836
Bartlett's Test of Sphericity	Approx. Chi-Square 296,565
	df 55
	Sig. ,000

- Goal attainment dimension

### Descriptive Statistics

	Mean	Std. Deviation	Analysis N
consistently produces the best health outcomes while controlling costs	3,63	,868	140
reduced costs by improving the adequacy of care	2,97	1,280	140
allocates budgets between services on the basis of their relative cost-effectiveness	3,16	1,136	140
works with other organizations to develop databases to evaluate and track performance	3,19	1,015	140
a small percentage of patients with complications	3,89	,846	140
patients are very satisfied with the results of care	3,24	1,077	140

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,761
Bartlett's Test of Sphericity	Approx. Chi-Square	122,356
	df	15
	Sig.	,000

### Communalities

	Initial	Extraction
consistently produces the best health outcomes while controlling costs	1,000	,497
reduced costs by improving the adequacy of care	1,000	,567
allocates budgets between services on the basis of their relative cost-effectiveness	1,000	,637
works with other organizations to develop databases to evaluate and track performance	1,000	,268
a small percentage of patients with complications	1,000	,947
patients are very satisfied with the results of care	1,000	,475

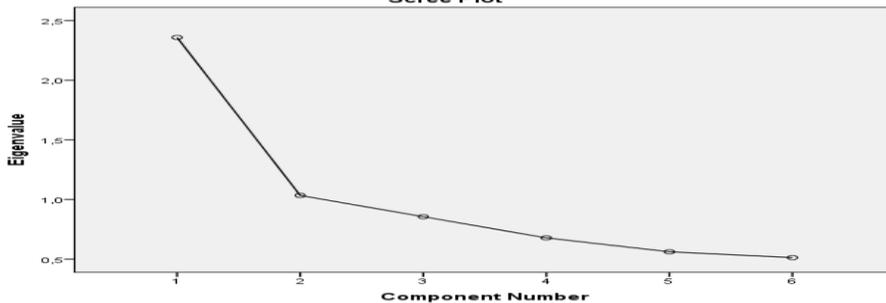
Extraction Method: Principal Component Analysis.

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,358	39,305	39,305	2,358	39,305	39,305	2,347	39,120	39,120
2	1,034	17,231	56,535	1,034	17,231	56,535	1,045	17,415	56,535
3	,856	14,264	70,799						
4	,678	11,301	82,100						
5	,561	9,355	91,455						
6	,513	8,545	100,000						

Extraction Method: Principal Component Analysis.

### Scree Plot



- **Service production Dimension :**

**Descriptive Statistics**

	Mean	Std. Deviation	Analysis N
length of stay is low compared to other similar hospitals	2,86	1,063	140
increased the range of services offered	3,46	,947	140
large number of emergency room admissions	2,82	,962	140
developed his ambulatory services	3,44	,998	140
high degree of coordination between clinical staff and logistics staff	4,27	,776	140
great coordination among professionals	4,14	,770	140
great coordination between care units	3,53	,992	140
constantly trying to improve the quality of care	4,10	,816	140
humanitarian character in the provision of service	2,94	1,065	140
services easily accessible to those who need them	3,27	,728	140
excellent care from a technical point of view	2,74	1,148	140

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,706
Bartlett's Test of Sphericity	Approx. Chi-Square	227,264
	df	55
	Sig.	,000

**Communalities**

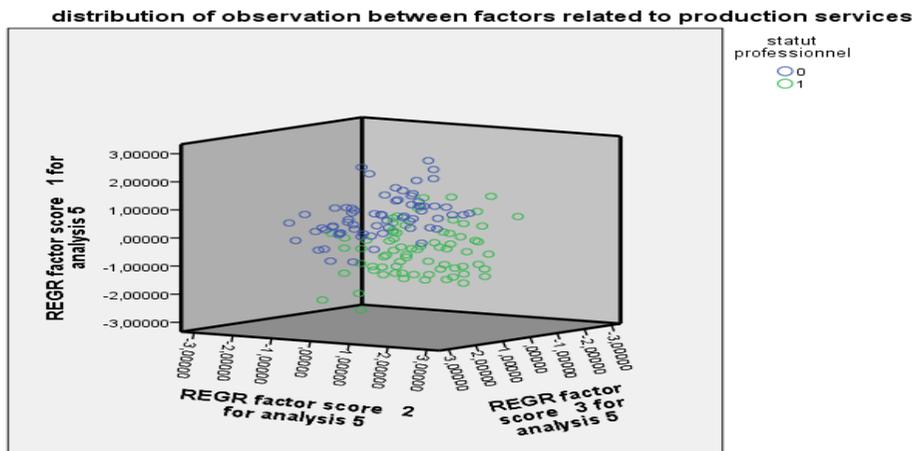
	Initial	Extraction
length of stay is low compared to other similar hospitals	1,000	,687
increased the range of services offered	1,000	,354
large number of emergency room admissions	1,000	,525
developed his ambulatory services	1,000	,824
high degree of coordination between clinical staff and logistics staff	1,000	,550
great coordination among professionals	1,000	,566
great coordination between care units	1,000	,503
constantly trying to improve the quality of care	1,000	,606
humanitarian character in the provision of service	1,000	,682

services easily accessible to those who need them	1,000	,595
excellent care from a technical point of view	1,000	,532

Extraction Method: Principal Component Analysis.

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,728	24,804	24,804	2,728	24,804	24,804	2,592	23,564	23,564
2	1,470	13,361	38,164	1,470	13,361	38,164	1,439	13,080	36,644
3	1,133	10,302	48,466	1,133	10,302	48,466	1,208	10,982	47,625
4	1,094	9,945	58,412	1,094	9,945	58,412	1,186	10,786	58,412
5	,929	8,443	66,855						
6	,826	7,511	74,366						
7	,778	7,069	81,435						
8	,622	5,657	87,092						
9	,562	5,108	92,201						
10	,507	4,607	96,808						
11	,351	3,192	100,000						

Extraction Method: Principal Component Analysis.



- **Culture and values maintaining dimension :**

**Descriptive Statistics**

	Mean	Std. Deviation	Analysis N
reviews and updates its missions and objectives	3,01	,777	140
philosophy of care is common to all staff members	2,39	,774	140
organizational objectives have been integrated by everyone	3,66	,803	140
formal mechanisms to discuss and resolve ethical issues	3,11	,975	140
staff members feel they have the necessary expertise	3,56	,850	140
opportunity to improve their management skills	3,47	,800	140
create a sense of trust among staff members	3,62	,809	140
staff members are aware of the importance of their work	3,57	,883	140
formal dispute resolution channels have been established	2,76	,966	140

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	,708
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig.
	157,380
	36
	,000

**Communalities**

	Initial	Extraction
reviews and updates its missions and objectives	1,000	,432
philosophy of care is common to all staff members	1,000	,361
organizational objectives have been integrated by everyone	1,000	,669
formal mechanisms to discuss and resolve ethical issues	1,000	,569
staff members feel they have the necessary expertise	1,000	,548
opportunity to improve their management skills	1,000	,519
create a sense of trust among staff members	1,000	,518

staff members are aware of the importance of their work formal dispute resolution channels have been established	1,000	,596
	1,000	,623

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,487	27,631	27,631	2,487	27,631	27,631	2,034	22,604	22,604
2	1,264	14,047	41,678	1,264	14,047	41,678	1,446	16,062	38,665
3	1,084	12,044	53,723	1,084	12,044	53,723	1,355	15,057	53,723
4	,979	10,873	64,596						
5	,868	9,644	74,240						
6	,700	7,773	82,012						
7	,618	6,866	88,878						
8	,532	5,916	94,795						
9	,468	5,205	100,000						

Extraction Method: Principal Component Analysis.

• **Alignment dimension :**

**Descriptive Statistics**

	Mean	Std. Deviation	Analysis N
resource allocation is appropriate with the targeted objectives	3,53	1,000	140
objectives are adequate with the needs of the population	3,01	1,106	140
choice of objectives is relevant with available resources	3,13	1,137	140
resources are sufficient to improve the quality of care delivered	3,75	,915	140
service provided is consistent with the needs of the population	3,15	1,079	140
production performance process characteristics adequate to goal attainment	2,76	1,097	140
the production system congruent with organizational values	2,78	1,113	140
production system conducive to encourage fundamental values	3,14	1,040	140
organizational goals (or reorientation of strategies) congruent with organizational values	3,25	1,053	140
the organizational changes / restructuring congruent with organizational values	3,37	,900	140
rationality			
the availability of resources, shifts in population needs new social trends reshaping org values	3,61	,828	140

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	,692
Bartlett's Test of Sphericity	Approx. Chi-Square
	245,645
	Df
	55
	Sig.
	,000

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,671	24,281	24,281	2,671	24,281	24,281	2,653	24,121	24,121
2	1,887	17,156	41,437	1,887	17,156	41,437	1,815	16,498	40,619
3	1,088	9,890	51,327	1,088	9,890	51,327	1,178	10,708	51,327
4	,952	8,653	59,980						
5	,923	8,393	68,373						
6	,734	6,671	75,044						
7	,709	6,445	81,488						
8	,626	5,686	87,175						
9	,524	4,768	91,943						
10	,467	4,250	96,193						
11	,419	3,807	100,000						

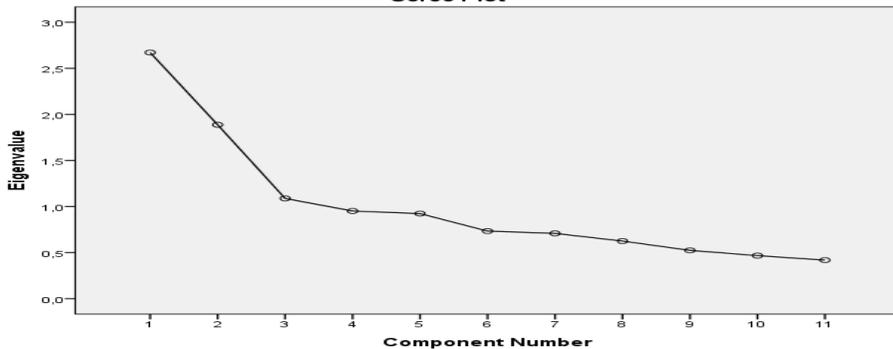
Extraction Method: Principal Component Analysis.

**Communalities**

	Initial	Extraction
resource allocation is appropriate with the targeted objectives	1,000	,535
objectives are adequate with the needs of the population	1,000	,525
choice of objectives is relevant with available resources	1,000	,425
resources are sufficient to improve the quality of care delivered	1,000	,830
service provided is consistent with the needs of the population	1,000	,586
production performance process characteristics adequate to goal attainment	1,000	,328
the production system congruent with organizational values	1,000	,522
production system conducive to encourage fundamental values	1,000	,483
organizational goals (or reorientation of strategies) congruent with organizational values	1,000	,506
the organizational changes / restructuring congruent with organizational values	1,000	,466
the availability of resources, shifts in population needs new social trends reshaping org values	1,000	,440

Extraction Method: Principal Component Analysis.

**Scree Plot**



# 국문초록

## 튀니지 지역 보건소의 공중보건 성과 인식:

의료진과 관리자 간 통합적 관점을 중심으로

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글로벌행정전공

튀니지의 지역 보건소는 2 차 병원과 대학병원과는 달리 전반적인 성과를 평가하기 위한 모델을 갖고 있지 않았다. 따라서 보건 체계 최전방의 약점을 보완하고 의료 서비스 질을 개선하기 위한 공통의 성과 모델을 설계할 필요가 있다. 평가 성과 모델을 확립하는 첫 번째 단계는 지역 보건소의 이해관계자 사이에 공중 보건 성과의 공통 개념을 설정하는 것이다. 관리자와 의료진 간의 성과 차원에 대한 인식의 차이와 합의점을 이해하는 것이 모두가 합의한 통합 모델의 향후 구현을 위한 기반으로 간주되는 이유이다.

여기서 본 연구는 지역 보건소의 관리자와 의료진이 공중 보건 성과에 대해 갖는 인식에 대하여 조사한 설문지의 결론을 제시한다. 설문지는 Sicotte 외 연구진(1988)의 성과 모형과 네 가지 관점을 사용하여 고안되었다. 스튜던트 검사와 PCA 방법을 통한 요인 분석은 공중 보건 성과에 있어 전문가들 간의 태도 차이를 나타낸다. 또한 인터뷰를 통한 질적 접근은 이들 행위자 간 지향의 차이를 보여준다. 관리자들은 모든 기술적, 관리적 측면을 고려하여 의료전달체계에 있어 거시적 견해를 견지한다. 한편, 지역 보건소에서의 사회적 인정을 위한

분투로 인해 의료진은 공중 보건 성과에 있어 자신의 직업적 상황과 1 단계 의료 서비스의 업무에 대한 기존의 기대에 국한된 좁은 관점을 가지고 있다.

공중 보건 성과에 대한 모든 행위자들의 견해를 통일하는 것은 공중 보건 성과 모델의 틀을 설계하는 데 있어 필수적인 것으로 보인다. 이를 위한 가장 효율적인 방법은 중앙 정부와의 대화에 더하여 조직 내의 행위자 간 대화와 커뮤니케이션을 강화하는 것이다. 이러한 서로 다른 개념화의 혼합에서 비롯되는 통합 모델은 이들 조직의 책임에 대한 요구에 대응하는 성과 측정 도구를 설계하는데 유용할 것이다.

주제어: 지역 보건소, 공중 보건 성과, Sicotte 모형, 인식, 관리자, 의료진

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