

Article

# Managerial roles in dentistry: perceptions, knowledge and skills of professionals

Carlotta Grammatico<sup>1\*</sup>, Fabrizio Guerra<sup>1</sup>, Giuseppe La Torre<sup>2</sup>

<sup>1</sup>Department of Odontostomatological and Maxillofacial Sciences, Sapienza University of Rome

<sup>2</sup>Department of Public Health and Infectious Diseases, Sapienza University of Rome

\*Correspondence: Carlotta Grammatico; e-mail: carlotta.grammatico@gmail.com

## Abstract

*Background:* Our research aims to investigate the perceptions of managerial roles by dental hygienists' and dentists' and to identify their managerial and leadership knowledge and skills.

*Methods:* dental hygienists, dentists, and dental hygiene and dental students were given a 30 items questionnaire to fill out. *Results:* The questionnaire revealed excellent results in terms of reliability, both in terms of perception of the importance of managerial roles and personal skills relating precisely to managerial roles. Furthermore, the questionnaire also showed high internal consistency and adequate reproducibility. *Conclusions:* Most professionals perceive managerial roles in dentistry to be important, nevertheless their skills in these roles are not sufficiently developed.

**Keywords:** Perceptions, knowledge, skills, leadership, dental management roles.

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## Background

It is becoming increasingly clear that the dental practice today represents a complex organizational reality: to be competitive, professional, intellectual and manual skills, are no longer enough, and it is necessary to develop managerial skills (economic, organizational, communicative) too and use appropriate control tools such as computer, management. Only in this way, indeed, it will be possible to satisfy the evolving demand of patients.

The dental activity [1] therefore requires a management capable of directing the behavior of all operators towards the achievement of effective results, efficient and able to meet the expectations of users.

So, the common goal of management studies is to help those who lead companies to meet simultaneously human needs and work efficiency, in a scenario that sees sudden changes in economic and social conditions.[2]

As Prof. Mintzberg suggests [3], the roles of planning, organization, management and control can be traced to three categories of membership: interpersonal, informative and decision-making. In the interpersonal sphere, the manager carries out a series of legal, social and leadership tasks - capable of motivating and inspiring his employees.

In the information sphere, he plays the role of communicator and spokesman for his unit.

Finally, in the decision-making sphere, the work of the manager is split between the role of entrepreneur - who initiates projects to make changes -, resources allocator, and negotiator in important treaties.

The role of health manager includes all members of the health organization placed in positions of authority and who are therefore responsible for the work of other people and the use of resources.

The managerial role is a real methodology that must be an integral part of the management behavior of the team of professionals.

The main purpose of this study is then to investigate the perception of managerial roles and identify the knowledge and skills of dental hygienists and dentists in the field of management and leadership.

## **Methods**

This pilot study was carried out between March and July 2021.

It was decided to propose a validated questionnaire consisting of three sections:

- Section A, represented by socio-demographic characteristics and composed of 10 items, collects data on gender, age, region of residence, region of three-year and/or master's studies, profession, professional qualifications obtained, post-graduate qualifications, years of working age, and care setting.

- Section B, consisting of 10 items, represents the first part of the questionnaire that investigates the perception of the importance of managerial roles.

- Section C, also consisting of 10 items, represents the second part of the questionnaire whose goal is to best describe personal skills related to managerial roles.

The considered Mintzberg's roles were the following:

### **Interpersonal sphere:**

1) representative, formal, and official figure both inside and outside.

- 2) leader who guides, trains, and motivates employees.
- 3) manager of relations with colleagues from other units or companies.

**Information sphere:**

- 4) supervisor who carefully monitors what is happening.
- 5) disseminator who transmits essential information to the employees.
- 6) spokesperson for his unit.

**Decision-making sphere:**

- 7) entrepreneur who tries to improve his unit.
- 8) manager of disturbing factors who deals with unexpected events.
- 9) allocator of resources, in particular human resources, to activities / projects
- 10) negotiator with staff, clients, trade unions, ...

*Statistical analysis*

Responses in sections B and C were structured according to a 5-point Likert scale (not important, not very important, fairly important, important, and very important). Data entry was done using an Excel file, and statistical analysis was conducted using SPSS® release 25.0 software. Reliability, thus the internal consistency of the construct, was calculated using Cronbach's Alpha. Reliability coefficients give overall information about the reliability of the test, that is information about the whole test.

**Results**

The questionnaire was answered by 250 operators (81% female, mean age 36.2 years  $\pm$  1.51) (**Table 1**)

**Table 1 – Characteristics of the participants**

<b>Char.</b>	<b>N. (%) or mean (SD)</b>
<i>Gender</i>	
Female	203 (81,2)
Male	47 (18,8)
<i>Age</i>	
	36,2 (1,51)
<i>Health care workers</i>	
Dental Hygienist	200 (80)
Dentist	10 (4)
Dental Hygienist Student	18 (7,2)
Dental Student	22 (8,8)
<i>Years of working age</i>	
	11(1,37)
<i>Relevant care setting</i>	
Private Structure	194 (77,6)
Public Structure	19 (7,6)
Public Structure and Private Structure	37 (14,8)

Regarding the perceived importance of managerial roles, the analysis showed a standardized Cronbach's Alpha of 0.930 (**Table 2**), corresponding to very good reliability.

**Table 2 – Statistical analysis of internal consistency of the questionnaire on the perception of the importance of managerial roles.**

	Scale average when the item was deleted	Scale variance when the item was deleted	Correct Correlation	Item-Total	Cronbach's Alpha when the item was deleted
D1	31,57	70,439	,579		,930
D2	32,02	65,662	,767		,921
D3	31,81	68,683	,640		,927
D4	32,40	65,221	,779		,920
D5	32,19	66,940	,733		,923
D6	32,12	66,885	,745		,922
D7	31,78	66,375	,760		,921
D8	31,78	67,078	,772		,921
D9	32,28	66,156	,749		,922
D10	32,60	64,708	,741		,922

About perceptions of personal ability with respect to managerial roles, the analysis showed a standardized Cronbach's Alpha of 0.968 (**Table 3**), corresponding to very good reliability.

**Table 3 – Statistical analysis of internal consistency of the questionnaire on the perception of personal abilities regarding managerial roles**

	Scale average when the item was deleted	Scale variance when the item was deleted	Correct Correlation	Item-Total	Cronbach's Alpha when the item was deleted
D1	28,78	113,825	,830		,965
D2	29,09	112,743	,876		,964
D3	28,98	115,108	,802		,966
D4	29,34	113,223	,864		,964
D5	29,16	113,551	,882		,964
D6	29,10	111,989	,856		,965
D7	28,84	112,223	,874		,964
D8	28,93	113,087	,878		,964
D9	29,28	114,027	,850		,965
D10	29,51	114,130	,810		,966

## Discussion

The literature shows that managerial skills are positively associated with organizational performance.

On the other hand, as pointed out by Grocock and coll [4], leadership skills are important for all members of the dental team, especially when looking at a multidisciplinary treatment model in dentistry.

In the United States (USA), the use of an approach to the coordination of dental care was explored by the American Dental Association in 2004, creating a major pilot project to train and implement the Community Dental Health Coordinators.

The scientific literature [5] stresses that care coordinators have a key-role in defining the quality of patient-centred care and that their behavior and attitudes are crucial of patient satisfaction and even adherence to treatment. This study allows to draw reflections that provide an analysis of knowledge, skills and perceptions of managerial roles in the dental field.

It emerges that most professionals perceive important managerial roles in dentistry and that, overall, their skills in these roles are not sufficiently developed, despite the professionals themselves consider them important.

The questionnaire found excellent results in terms of reliability both regarding the perception of the importance of managerial roles, and to personal skills related to managerial roles. The questionnaire also showed a high internal consistency and adequate reproducibility.

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