International University of Leadership

Where Leaders Are Born!

The Impact of Evidence-Based Communication on Healthcare: A Case Study in the Dental healthcare sector in Morocco

By Asmae EL MANSARI

Thesis dissertation submitted in partial fulfillment of the requirements

For the degree of Master of Business Administration

Concentration Course: Healthcare Management

Private International Institute of Management and Technology

August 2020

Abstract

Many factors influence the physician-patient relationship and it is physicians' responsibilities to manage these different factors using communication as a tool to get through to patients. However, just like in any sector, healthcare is not immune to communication challenges. In an effort to overcome these challenges, the notion of evidence-based communication is introduced and has proven its effectiveness in terms of optimal patient care and practitioner job satisfaction, thus successfully achieving patient-centered care.

The aim of this study was to define the relationship between evidence-based communication and patient-centered care in the dental healthcare sector in Morocco by running a detailed survey questionnaire to assess how invested dentists are in following the best healthcare approach for their patients and conclude whether communication plays a big role in it.

Our findings defined five themes which are diagnostic accuracy, adherence to treatment, patient satisfaction and safety, team satisfaction, and malpractice risk. Though our hypothesis stating that evidence-based communication contributes to optimal healthcare delivery was confirmed, more studies should be led in order to highlight how deeply rooted this relationship is and what means are necessary to explore it to the fullest.

Keywords: Healthcare management, Evidence-based communication, Physician-patient relationship, Patient-centered care.

Declaration

I hereby declare that this thesis is the fruit of my own work and that it has not been submitted, in whole or in part, in any previous application for a degree. Except where stated otherwise by reference or acknowledgment, the work presented is entirely my own.

Dedication

This thesis is dedicated to my beloved family and close friends, as well as every acquaintance, both personal and professional, who have helped bring this work to life. I owe my new career path to you.

Acknowledgements

To Professor Ahmed Salemi,

Sir, it has been a tremendous honor to have made your acquaintance. I am particularly pleased to have had the Human Resource Management course with you; it was not only educational but also distinguishably memorable. Furthermore, I cannot thank you enough for your generous guidance with my thesis process; it definitely helped shape my work into what it is. I truly hope that we'll get to work together some time in the future.

To my professors Pr Saad Belkouch, Pr Jalal Mouti, Pr Chaimae Bahi Slaoui, Pr Abderrahmane Jassim, Pr Richard Canton, & Pr Ounsa Achour,

My academic experience with you has been beyond rewarding. I have learned so much from you and I will undoubtedly carry your teachings with me as I progress in my professional life. Thank you for helping me find my purpose through your rich courses, I will make sure to put all of it to good use.

To my parents, Ms Bouchra Bouariche & Mr Mustapha El Mansari,

You have accompanied me in yet another new journey and gave your all to watch me thrive. I literally would not be where I am now if it weren't for you. I hope that I made you proud. I am forever in your debt.

To my siblings, Ms Safae El Mansari & Mr Abderrahmane El Mansari,

As I pulled through these past two years, you have always been my pillars of strength when I was frail, my beam of light every time I took a leap in the dark, and my beating heart once I got a new lease on life. I'm the luckiest sibling in the world.

To my grandparents, Ms Mokhtara Sadki & Sidi Mohammed Bouariche,

You have looked after me my entire life and were present every step of the way during my studies. I am nothing without your love and nurture. May you live long to see me exactly as you hope.

To Ms Ibtissam Benzerga,

You have always believed in me no matter how quirky or impossible my dreams seemed. As I pursued a new dream, you've been there for me through thick and thin. Thank you so much, sister. I wholeheartedly appreciate it.

To Ms Mariam Mounsif,

Despite having gone our separate ways career-wise, you remained my study buddy every step of the way. Thank you for your continuous support and for believing in my potential whenever I doubted it. I owe you for life.

To Ms Kenza Loulidi,

Ah, my favorite businesswoman. You have no idea how much you have inspired me during this new academic ride. I have always looked up to you and I still do. Thank you for sharing your wisdom with me.

To Ms Ilham Houem, Ms Basma Rezki, & Ms Wissal Kassimi,

Having you by my side during this new challenge was absolutely comforting. Ladies, I can never thank you enough. I am truly blessed to have you in my life up to this very moment.

To Ms Asmaa Machi, Ms Imane El Ouali, Ms Narimane Zerouali, & Ms Zineb Ineflass,

You are the greatest support system anyone can ask for. You have showered me with so much love and your belief in me leaves me simply speechless. I'm truly humbled and I hope I can pay your kindness back one day.

To Mr Amine Aziz,

Ever since I coincidentally met you on the day I came back to Rabat for my studies, I knew it was a good omen. I'm always thankful for my big brother being there for me, you're the best.

To Mr Paul Bartelds,

You have never shied away from sharing your insight with me whenever I sought your help. You definitely marked these past two years and for that I am genuinely grateful. You're awesome.

To Mr Otmane Benyassine, Mr Mustapha Fakhouri, Ms Hajar Bennani & Ms Meriem Ait Bacha

You have been a tremendous help throughout the past two years, especially when it came to dealing with my constant requests. Thank you so much for your hard work.

To Ms Soraya El Yaagoubi and Ms Ikram Regad,

I was very glad to have met you. You are wonderful ladies and you definitely made my curricular experience a lot easier and happier. I wish you the very best that life has to offer.

Table of Contents

Chapter One : Introduction

1.1. Introduction

Communication is the basis of healthcare. Given the fact that the physician-patient relationship is mainly communication-centered, any lack or disruption in the latter could result in a poorly managed healthcare delivery (Vermeir et al., 2015; Merlino, 2017).

This being said, many measures should be taken into account in the workplace to maintain effective communication between physicians and patients, which in return would pave the way for a better healthcare delivery (Chou, 2018).

1.2. Background

Despite the fact that healthcare has seen tremendous progress in both diagnosis and treatment of many illnesses, there remains a serious scarcity in the way physicians handle their patients. In fact, this ineptitude to attentively listen to their patients' perspective and answer their queries in a holistic manner is the reason for the gap that has been slowly growing over the years, thus resulting in "doorknob" questions and patients' skepticism about doctors' verdicts (O'Daniel & Rosenstein, 2008; Chou, 2018).

This makes us think about what doctors can do to overcome this obstacle which leads to mistrust and eventually a failed follow-up on their patients' well-being.

1.3. Topic

As established, the interaction that brings the medical staff and their patients together is crucial for the success of their treatment plan. Likewise, patients who connect with their caregivers perceive an improvement in their health due to their adherence to treatment and willingness to self-manage their state of health (Chou, 2018, Tehranineshat et al., 2019).

The ideal would be to instate what is known as the patient-centered care model, which underlines the key aspects of healthcare communication by developing a set of communication skills such as reflective listening and empathy in a way to tend to patients' needs, values, and personal preferences (Walshe & Rundall, 2001; O'Daniel & Rosenstein, 2008).

The following pointers can help deliver the perfect patient-centered communication: (Walshe & Rundall, 2001; O'Daniel & Rosenstein, 2008; Rodin et al., 2009; Tehranineshat et al., 2019)

- Identifying patients' needs and demands in terms of healthcare.
- Training the medical staff's interpersonal skills to ensure optimal patient care.
- Correcting misconceptions that may compromise the treatment plan.
- Taking patients' observations and complaints into consideration.
- Developing recommendations for effective communication between staff and patients.

1.4. Aim, Objectives, & Hypothesis

Good communication is based on an efficient exchange of information. When applied to healthcare, doctors are supposed to build accurate, thorough, and clear conversations in an honest and compassionate manner which would allow patients to successfully understand and accept what's being said to them, thus ultimately establishing a healthy physician-patient relationship based on trust and reliance (Vermeir et al., 2015; Merlino, 2017). All of this is part of a multifaceted process called patient-centered care (Picker Institute, n.d. ; Cheraghi et al., 2017; Parse, 2019).

One way to achieve patient-centered care is by implementing evidence-based communication, which is a competency-based approach that implements communication skills in an efficient manner to deliver safe, effective patient care (Henry et al., 2013).

The aim of this study is to define the relationship between evidence-based communication and patient-centered care in the dental healthcare sector in Morocco. Thus, the following objectives are set:

- To find out how effective communication is in the dental healthcare sector in Morocco.
- To identify the common communication skills practiced by Moroccan dentists.
- To describe the impact of a good evidence-based communication on health outcomes in dentistry.

Achieving the objectives above will help us confirm or refute the hypothesis stating that evidence-based communication contributes to optimal healthcare delivery.

1.5. Summary of Methodology

Many studies have attempted to answer the aforementioned hypothesis, where the most common method of data collection took place via surveys that inquire about factors that play an important and binding role between communication and healthcare. Some of the recurrent themes are diagnostic accuracy, adherence to treatment, patient satisfaction and safety, team satisfaction, and malpractice risk (Walshe & Rundall, 2001; Rodin et al., 2009; Institute for Healthcare Communication, 2011; Merlino, 2017; Omura & al., 2018; Tehranineshat et al., 2019; Udvardi, 2019).

Likewise, we collected data through a survey that tackles the aforementioned themes via a set of detailed questions targeting the dental healthcare sector in Morocco. This would allow us to

assess how invested dentists are in following the best healthcare approach for their patients and conclude whether communication plays a big role in it in order to confirm or refute our hypothesis.

1.6. Summary of Chapters

1.6.1. Chapter One – Introduction

The first chapter highlights the background of our research before introducing the thesis topic. Then it proceeds by stating the aims, objectives, and hypothesis of our study, before briefly describing the methodology used to conduct it. Finally, a summary of chapters is presented.

1.6.2. Chapter Two – Literature Review

This chapter brings up an overview of communication and its importance in management by citing its roles and barriers. Next, light is shed on healthcare and its pillars, evolution, and the obstacles this sector faces. Then, evidence-based communication is defined and detailed in terms of its origins and various models, before the relationship between evidence-based communication and healthcare is finally addressed by focusing on patient-centered care.

1.6.3. Chapter Three – Methodology

The third chapter describes the methodology used to conduct our study, including tools used for data collection, sampling, and data analysis. Limitations of the study are also cited.

1.6.4. Chapter Four – Findings

This chapter presents the findings of our study which mirrors the findings of literature and brings us a step further towards achieving the research objectives and answering the hypothesis.

1.6.5. Chapter Five – Discussion

The fifth chapter compares and contrasts the similarities and differences between our findings and those of literature and past studies.

1.6.6. Chapter Six – Conclusion

The final chapter concludes this research by summarizing the topic, confirming whether the hypothesis is right or wrong, and mentioning findings' implications in the field before limitations of the study are pointed out and future research to be conducted is suggested.

Chapter Two: Literature Review

2.1. Introduction

Communication has always been a valuable asset that facilitates coordination. Its importance lies in a vast selection of activities that ranges from small-scale tasks to more complex ones that require team effort. This being said, "cheap talk" communication holds a strategic role in exchanging valuable information about the state of the world and should not be taken for granted (Vorobeychik et al., 2017).

From a healthcare management point of view, many measures should be taken into account in the workplace to maintain effective communication in the physician-patient relationship, which in return would pave the way for better health outcomes (Chou, 2018).

Many factors influence the physician-patient relationship and it is physicians' responsibilities to manage these different factors using communication as a tool to get through to patients. However, just like in any sector, healthcare is not immune to communication challenges. In an effort to overcome these challenges, the concept of evidence-based practice based on clinical reasoning and decision making inspired the birth of evidence-based healthcare management. Likewise, the notion of evidence-based communication was introduced and has proven its effectiveness in terms of optimal patient care and practitioner job satisfaction (Henry et al., 2013; Jaana et al., 2014; Lehr & Bosman, 2015; Holdforth, 2017), thus successfully achieving patient-centered care ("The principles of quality person-centred care provision", n.d.).

Implementing the patient-centered care model in healthcare delivery is crucial to tend to patients' needs, values, and personal preferences by developing the necessary communication

competencies to engage with these patients (Walshe & Rundall, 2001; O'Daniel & Rosenstein, 2008; Boggiano et al., 2017; Powers et al., 2019).

2.2. The importance of communication in management: an overview

Communication and management are intertwined, as the latter is impossible to accomplish without the former. Being one of the key mechanisms that direct coordination in a group of people, communication becomes a tool that develops a symbolic language responsible for achieving coordination. Furthermore, a series of studies were conducted to highlight the contribution of communication to the effectiveness of task coordination, thus ensuring a proper management of the tasks at hand (Vorobeychik et al., 2017).

2.2.1. Essentials in management

Management is a concept that has been long established and explored but remains vague despite the numerous definitions attempting to capture its concrete characteristics. In an effort to further encapsulate both meaning and content of the term, an analysis of its various definitions is a must (Kaehler & Grundei, 2019).

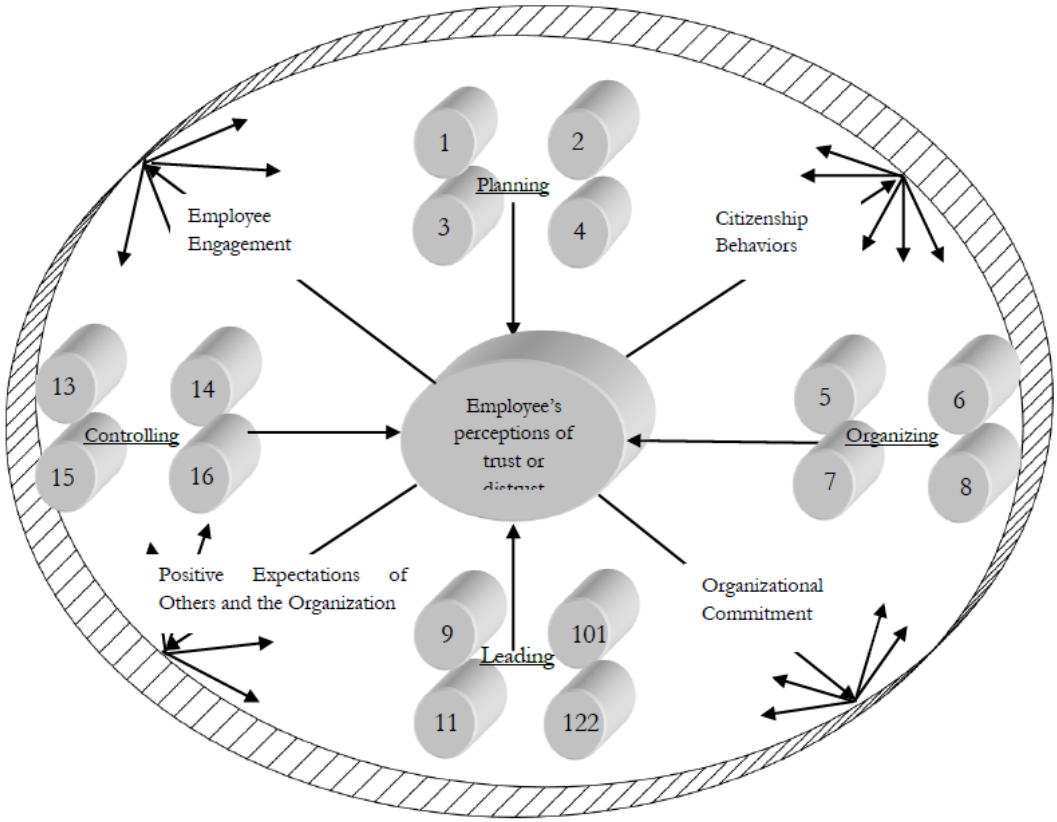
Management according to Katz (1955) is "exercising direction of a group or organization through executive, administrative, and supervisory positions." Whereas Kotter (2001) defined it as "a job which takes care of planning, organizing, budgeting, coordinating and monitoring activities for group or organization." Moving on to Northouse's definition (2007), management is "a process by which definite set objectives are achieved through the efficient use of resources." All these definitions agree that management is a process that efficiently uses resources to achieve organizational goals (Algahtani, 2014).

However, the definition is still lacking. A more holistic representation of management would be through the definition of Kinicki & Williams (2018) that says "Management is defined as (1) the pursuit of organizational goals efficiently and effectively by (2) integrating the work of people through (3) planning, organizing, leading, and controlling the organization's resources" (Kaehler & Grundei, 2019).

Planning, organizing, leading, and controlling are management's four core functions and are deemed necessary for the success of the entire process. However management wouldn't be complete without the implementation of interpersonal trust that ensures the proper execution of the aforementioned functions (Schraeder et al., 2014; Kaehler & Grundei, 2019).

Figure 1 shows the various skills under each of management's four main functions. While all equally important, leadership holds a key skill that constitutes a strong and complementary element for success: communication. Communicating is an important lever because it directs the interactions with staff that would ensure a smooth and effective leadership which will subsequently impact team coordination (Schraeder et al., 2014; Bucăţa & Rizescu, 2017).

Figure 1. *Interpersonal Trust and the Four Functions of Management* (Schraeder et al., 2014)



Planning

1. Employee Involvement Decision Making
2. Employee Involvement in Gathering Information
3. Employee Involvement in Analyzing Information
4. Employee Involvement in Establishing and Prioritizing Goals

Leading

9. Communication
10. Motivation
11. Job Attitudes
12. Effective Change Management

Organizing

5. Transparent and Effective Employment Practices
6. Job Design (Create Enriched Jobs)
7. Decentralized Authority
8. Teams

Controlling

13. Use Control as a Tool for Employee Development and Continuous Improvement
14. Psychological Empowerment
15. Involve Employees in Developing and Managing Control Related Activities
16. Provide Timely, Accurate, and Informative Performance Data Used for Control Purposes

2.2.2. Communication: definitions

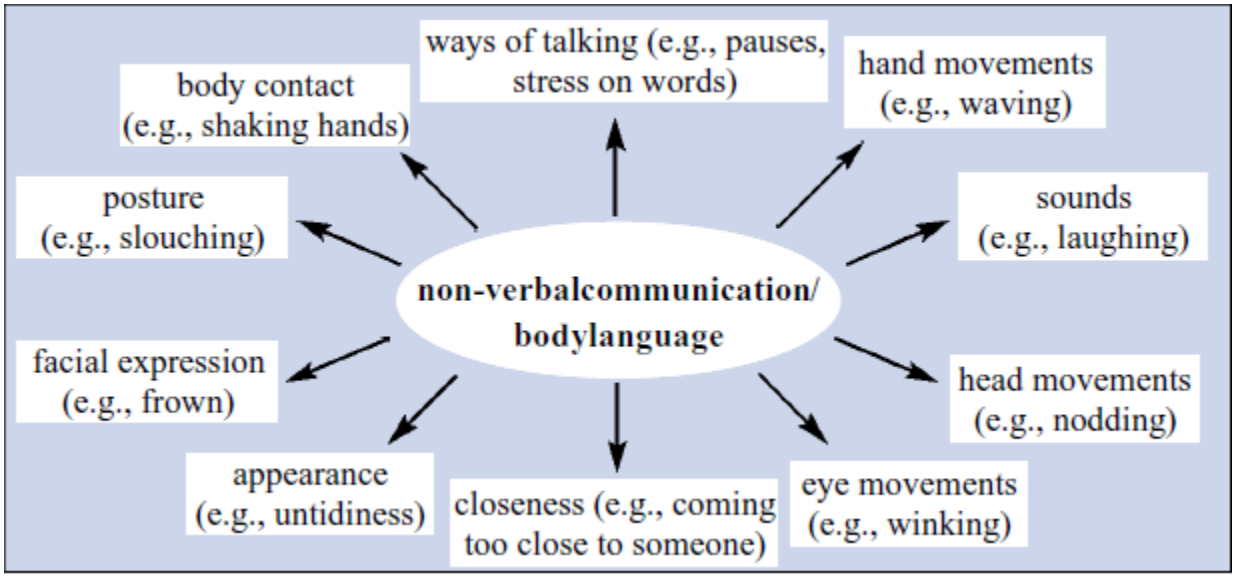
The root of the term “communication” is derived from the Latin “communis” meaning “common.” In this context, “to communicate” has many definitions such as “to make common or known,” “to share,” “to make generally accessible,” or “to discuss together” (Velentzas & Broni, 2014; Van Ruler, 2018).

According to Oxford Learner's Dictionaries (2020), three definitions were associated with the term "communication". The first one means that "Communication is the activity or process of expressing ideas and feelings or of giving people information;" and the second one defines communication as "Methods of sending information, especially phones, radio, computers, etc. or roads and railways." Finally, the third one depicts communication as "A message, letter or phone call."

From the previous definitions, the element that is to be common or shared is knowledge, or more simply information. Thus, communication is a tool that allows information exchange. It can be verbal or non-verbal, intentional or unintentional, conventional or unconventional (Velentzas & Broni, 2014).

Granted, information exchange comes with a purpose which is not only to inform but also to create meaning. This implies the psychological, social, and cultural perception of information as well as the intellectual understanding of the meaning behind the shared message. A successful communication, then, depends on the mutual understanding of the message conveyed through the information (Van Ruler, 2018).

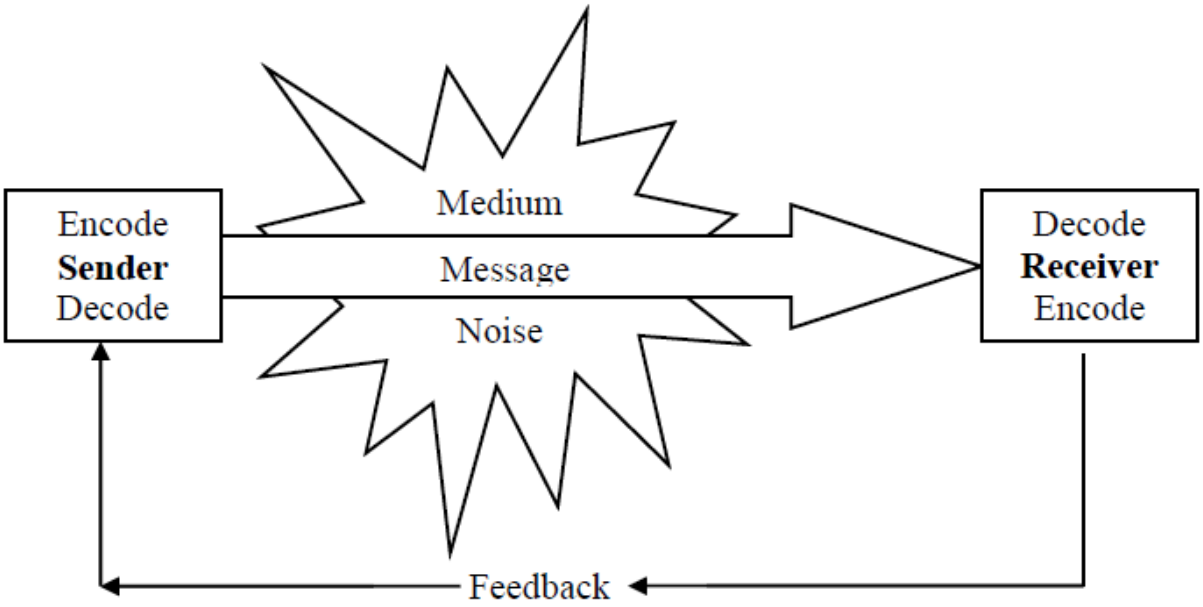
Figure 2. *Non-Verbal Communication/Body Language (Prozesky, 2000)*



To sum up, communication is "the act of conveying information for the purpose of creating a shared understanding" and takes place through exchange of thoughts and messages (feelings, needs, desires, perceptions, knowledge) via speech, visuals, signals, writing or behavior (Velentzas & Broni, 2014). Figure 2 shows types of non-verbal communication (Prozesky, 2000).

The communication process (figure 3) requires three elements: a sender, a message, and a recipient. The sender initiates communication by encoding his message and carrying it via a medium such as face-to-face conversation, telephone call, e-mail, or written correspondence. Noise is any factor that distorts the meaning of the message, like different interpretations, language barriers, interruptions, emotions, and attitudes. Once the recipient intercepts and decodes the message into meaningful information, he gives the sender his feedback by responding to the message. The communication process is considered complete when the receiver has understood the message of the sender (Lunenburg, 2010; Stott, 2011).

Figure 3. *The communication process. (Lunenburg, 2010)*



2.2.3. Roles of communication

Being a crucial management tool, communication's main role is to facilitate the establishment of a coherent environment within an organization. Learning how to communicate must be a top priority for managers as it is considered a key skill to either gain or polish in order to help meet the organization's objectives (Bucăţa & Rizescu, 2017).

Other communication roles include (1) motivation, since boosting people within an organization ensures a harmonious and efficient work environment; (2) raising morale, to encourage a persistent and consistent performance to pursue a common purpose; (3) unity, where the organization's goals become a team member's shared goals; (4) conflict resolution, this way no room will be spared for controversies and disagreements within a team (Mahajan, 2015).

From a managerial point of view, communication has a triple role: (1) an interpersonal role, where managers act as leaders and use a substantial amount of their time to maintain a

regular interaction with their peers and subordinates; (2) an informational role, where managers stay informed about all matters that could affect their responsibilities within the organization by collecting information both internally and externally all while providing necessary information to ensure the smooth operation of management; lastly (3) a decision-making role via implementing new projects and allocating resources, all of which is based on previously collected data and information to help make prompt decisions (Mahajan, 2015; Bucăţa & Rizescu, 2017).

2.2.4. Barriers to communication

Communication is a complex and unpredictable process that may experience a few limitations along the way. This could be due to the sender not expressing themselves clearly, noise distorting the message, or the receiving not understanding the sender clearly (Prozesky, 2000).

These limitations, also called barriers, prevent the sender and the receiver from properly conveying and understanding information, respectively. There are five types of communication barriers: attitudinal barriers, behavioral barriers, cultural barriers, language barriers and environmental barriers (Could, 1969; Rani, 2016).

Attitudinal barriers include differences in attitudes and values, acts of discrimination by passing judgment based on many factors (race, gender, education, age, ability, lifestyle, experience), abuse of hierarchical power in assigning duties, rewards, promotions, or dismissals, faulty display of leadership or mentoring through excessive control rather than guidance (Lunenburg, 2010; Rani, 2016; Mittal, 2018).

Behavioral barriers are generally based on cultural or social stereotypes, prejudice, and bias against a specific behavior, appearance, possession, or geographical area. Maintaining

similar attitudes within an organization can be very costly in terms of time and money (Lunenburg, 2010; Rani, 2016; Mittal, 2018).

Cultural barriers are unfortunately very common due to different cultures and backgrounds that create differences in values, beliefs, and attitudes. Severe lack of empathy in these situations keeps cultural barriers up and negatively impacts the organizational culture as it severs communication between staff members (Lunenburg, 2010; Rani, 2016; Mittal, 2018).

Another popular barrier is that of language. Speaking different languages or having different levels of language competency can be a serious obstacle. However, sometimes limitations occur despite speaking the same language. This could be due to utilizing inappropriate levels of language or using jargon that not everyone is familiar with. The novelty of the conversation topic can also contribute to the formation of language barriers (Lunenburg, 2010; Rani, 2016; Mittal, 2018).

The final type of barrier is due to the environment. Many factors interrupt the communication process and can be either physical or situational, such as physical distance, external distractions, interruptions, psychological state, and other message-distorting noises that were mentioned above (Lunenburg, 2010; Rani, 2016; Mittal, 2018).

2.3.Healthcare industry: then and now

2.3.1. Pillars of healthcare

Access, quality, and cost are three intertwined components that shape healthcare systems. Ideally, these three work together simultaneously in a way that access to affordable quality healthcare is not only facilitated but also guaranteed. Realistically, realizing one component usually comes at the expense of the two others (Bernstein, 2018).

Becoming the pillars of healthcare, William Kissick suggested the term "iron triangle" (figure 4) in 1994 to designate the policy tradeoffs regarding access to, quality and cost of care. Solving the iron triangle means providing easy access to healthcare that is both high quality and cost-friendly. Another term summing up healthcare system goals is "triple aim," coined by Donald Berwick and aiming to "enhance the individual experience of care, improve population health, and reduce per capita costs of care (Agarwal et al., 2019).

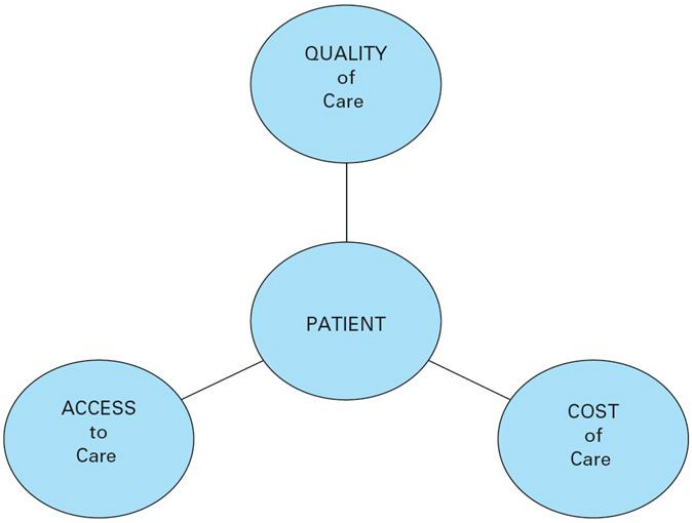


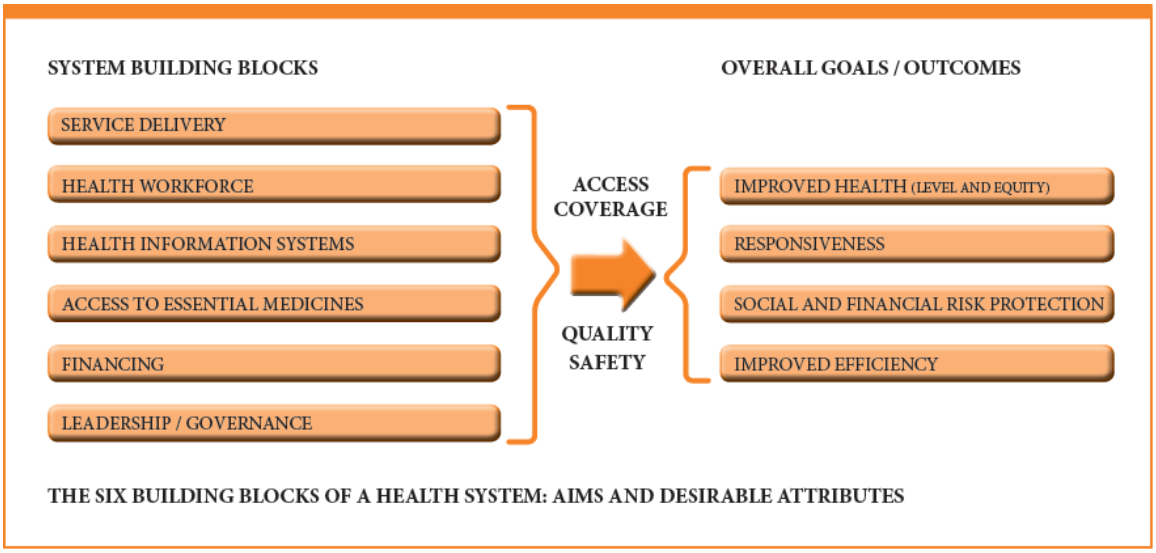
Figure 4. *The Iron Triangle of Healthcare* (Austin & Wetle, 2008/2017).

Many issues within the healthcare system prevent the resolution of the iron triangle of healthcare. Although there have been many advances in medical research, implementing the resulting outcomes in health care facilities is rather slow; which hinders access to proper care. Also, healthcare delivery systems are built without keeping patients' best interests in mind, thus further declining quality of care. Lastly, health care systems are as costly as they are financially unsustainable. All of this calls for the establishment of an iron triangle-based holistic healthcare delivery model that takes into consideration patients, healthcare providers, and expenditures (Austin & Wetle, 2008/2017; Starr et al., 2017). One way to do it is to observe other countries'

policies that have been tried, tested, and proven effective and to implement them in an attempt to solve the problems that the three main pillars of healthcare face on a daily basis (Hoffer, 2019).

Another healthcare framework (figure 5) was introduced by the World Health Organization (2010) which describes health systems in terms of six core components, also referred to as "building blocks." These elements are (1) service delivery, (2) health workforce, (3) health information systems, (4) access to essential medicines, (5) financing, and (6) leadership/governance.

Figure 5. *The WHO Health Systems Framework* (World Health Organization, 2010).



The usefulness of each building block lies in its identification and assessment of improvement opportunities. In terms of service deliveries, we find effective and efficient health interventions using a minimum of safe and good quality resources. Performance of health workforce is measured by its responsiveness, fairness, and efficiency in providing optimal healthcare outcomes. Producing, analyzing, and using information on health determinants, health system performance and health status in a reliable and timely manner indicates a performing

health information system. Access to essential medicines involves quality medical products, vaccines, and medical technologies which are also safe and cost-effective. Providing suitable funding for healthcare covers all needed services all while anticipating potential financial setbacks. Finally, leadership and governance ensures proper control of the health system via policies, regulations, accountability, and attention to system design (Manyazewal, 2017).

2.3.2. Evolution of the healthcare industry

The healthcare industry has long seen a domination of solo practice and freestanding hospitals adopting the fee-for-service model. However, things seem to be shifting towards medical homes, accountable care organizations, large hospital systems, and organized clinics which suggest alternative payment models. The pace of this transformation undeniably affects risk shift to providers, quality enhancement, and cost-effectiveness (Burns & Pauly, 2018).

Speaking of propelling healthcare, table 1 shows a side-to-side comparison between the old and new care model mindsets. While physicians used to be solely responsible for all medical duties, delegating tasks – and therefore power – to the rest of the medical staff has alleviated physicians' responsibilities and optimized team performance; subsequently enhancing patient satisfaction (Sinsky & Bodenheimer, 2019).

Table 1. *Old vs New Care Model Mindset* (Sinsky & Bodenheimer, 2019)

Old Mindsets	New Mindsets
The doctor does it all.	Share the care with the team: there is too much work to be done by 1 person, and it is too important to be left to chance.
The nonclinician team members have minimal skills and make limited contributions; so few are needed.	A well-trained and mentored team of at least 2 clinical assistants (MAs or nurses) per clinician is needed to fully leverage the skills of all. Care is better and more satisfying if work is strategically delegated according to ability.
Technology replaces people, therefore fewer people are needed.	People provide health care; technology plays a supporting role.
Health care is a transactional endeavor, the sum of many discrete tasks: in this model anybody will do.	Health care is a relational endeavor, founded on trusting and healing relationships. Continuity with the same people matters.
Regulatory over-reach: what you want to do is not allowed.	If what you want to do is safe and helps patients, do it. If each team member is trained, mentored, and audited for a certain task within the bounds of governmental regulation, health systems should allow it.
Overhead cost accounting: margins are tight, so we need to trim staff. Clinicians will have to pick up the slack and do work that the support staff might have done.	Opportunity cost accounting: by way of a simple hypothetical example, with a staffing ratio of 1:1 (CTC: MD) the primary care team may have the capacity to see patients that generate 6 RVUs per hour. With a staffing ratio of 3:1 the team will provide more patient visits that are more comprehensive and may generate 9 RVUs per hour. The difference is the opportunity cost: the organization lost the opportunity to generate 3 more RVUs per hour.
If physicians leave the organization, we will hire more physicians and/or less costly clinicians.	

CTC = care team coordinator; MA = medical assistant; MD = doctor of medicine; RVU = relative value unit.

The team-oriented care model is largely sought after and encouraged in order to put the old “the doctor does it all” model to rest and share the care to maximize meeting patients' primary care demands (Sinsky & Bodenheimer, 2019). In fact, nowadays registered nurses and licensed vocational nurses ensure a myriad of tasks in terms of preventive and chronic care. Also, physical therapists take on the duties of pain management and reeducation, and finally, medical assistants are no longer limited to their original job description, as they take on more tasks to provide primary care on behalf of physicians (Austin & Wetle, 2008/2017).

Another example of progress in the healthcare industry is Telemedicine, also known as telehealth, connected health, e-health, or digital health to name a few. It is defined as "the delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities." (World Health Organization, 2010)

In other words, telemedicine is the use of telecommunication systems to deliver health care remotely (Flodgren et al., 2016). Its effectiveness translates through providing access to enhanced cost-effective quality care all while ensuring continuous balance between innovation and pragmatic policies. (Combi, Pozzani, & Pozzi, 2016)

While telemedicine can be a relevant solution to deliver health care, there remains a scarcity in its implementation in health care facilities. Plus, many conditions need to be met on an organizational, economic, and strategic level in order to ensure a successful integration of telemedicine as a health care delivery strategy. (Alami et al., 2017)

Personalized healthcare is another healthcare delivery model that is constantly being prompted. Personalized medicine is defined as "The tailoring of medical treatment to the individual characteristics of each patient. The approach relies on scientific breakthroughs in our understanding of how a person's unique molecular and genetic profile makes them susceptible to certain diseases. This same research is increasing our ability to predict which medical treatments will be safe and effective for each patient, and which ones will not be." Thus, personalized healthcare is an upgrade of the medical model that depends on a multi-faceted approach

consisting of (1) risk assessment via genetic testing in order to reveal predisposition to disease, (2) prevention by intervening on a behavioral/lifestyle/therapeutic level, (3) detection of disease at the molecular level, (4) accuracy of diagnosis to enable individualized treatment strategy, (5) targeted treatments that improve outcomes and reduce side effects, and (6) management by actively monitoring response to treatment and disease progression ("The Age of Personalized Medicine", n.d.).

Despite being underappreciated and underrealized due to the apparent resistance to change in the health care industry, there are many benefits to personalized healthcare such as cancer and antimicrobial resistance, innovation in diagnosis tools and therapy, as well as better health promotion and prevention, and primary care. Focusing on the scope and potential of personalized healthcare would allow an excellent delivery of healthcare (Horgan et al., 2020).

2.3.3. Obstacles faced in the healthcare sector

Despite the commendable changes witnessed in the healthcare sector, many issues are yet to be solved. Some of these obstacles that directly impact patients can be summed up in the lack of access to basic medical, pharmaceutical, mental, and dental care; coordinated care; resources in terms of proper drug prescription and pain alleviation; and proper obstetric and maternity care (Chen et al., 2018; Fan et al., 2008; Hoxha et al., 2019; Seo et al., 2019).

The top three challenges that affect the healthcare system overall are inadequate health-based human resources, inadequate budgetary allocations to healthcare, and poor leadership and management in healthcare, indicating a poor performance of four pillars of the World Health Organization's health systems framework which are health service delivery, healthcare workforce, financing, and leadership and governance (Oleribe et al., 2019).

Other challenges include lack of access to healthcare, poor maintenance of healthcare infrastructure, non-use of evidence-based intervention, Non-prioritization of health activities, poor attitude and motivation of health workers, poor leadership and administration, health system corruption (Oleribe et al., 2019).

2.4.Health communication between theory and practice

Communication is vital for proper clinical practice in the medical field. Any miscommunication between healthcare providers or during anamnesis with a patient may lead to medical errors that could be fatal at times. Examples of these mistakes range from administrating the wrong dose of medication to omitting a crucial term in a medical report that could result in a wrong diagnosis and perhaps a lethal treatment (Lehr & Bosman, 2015).

2.4.1. Physicians' communication styles

Healthcare depends on effective and efficient communication. One of the most prevalent forms of communication between healthcare providers in specialized and primary care is written communication, namely correspondences and medical reports. Plus, developing communication skills is an essential characteristic that should be mastered during graduate and postgraduate training (Vermeir et al., 2015).

However, it seems that technology is still not conveniently utilized between healthcare providers, especially during out-of-hours when they are out of reach. This is due to the fact that one of the most frequently reported communication forms between healthcare professionals is the white board, which renders its effectiveness questionable. The outdated paging system left room for a lot of replacements such as electronic patient records and alternative communicating tools like WhatsApp and short message services (SMS). It is no news that technology's role in

facilitating communication within healthcare is crucial and its impact must be further studied (Brady et al., 2017).

There is no doubt that proper communication is the key to effective health communication, since it identifies relevant antecedents to behavioral responses and translates into clear and pertinent messages to ensure a smooth exchange between caregivers (Werder, 2017).

2.4.2. Physician-patient relationship

Not all patients express malaise and health issues the same way. This being said, mastering communication in a healthcare setting can heavily impact treatment accuracy, symptom relief, and support. Hence the physician-patient relationship must be based on efficient communication that leads to better health outcomes, treatment adherence, and patient satisfaction (Lasselin, 2018).

Furthermore, performing complete and efficient communication is a fundamental clinical skill added to physicians' competence that helps them establish a relationship of trust and alliance with their patients. This skill manifests through kindness, openness, and undivided attention and in return boosts medical performance and prestige of the personnel as well as patients' interest in their caregivers (Chichirez & Purcarea, 2018).

Many factors influence the physician-patient relationship and it is physicians' responsibilities to manage these different factors using communication as a tool to get through to patients.

Patients' personalities

Not all patients have the same personalities. Some of them are easy going while others are high maintenance. Plus, their behaviors could change depending on their current life circumstances that affect their feelings in general. While there are no textbook rules to guide physicians to deal with their patients, identifying the typology of patients may take doctors a step further in achieving the communication process. The following typology of patients is inspired from the medical practice and introduces five difficult personalities encountered during a medical visit (Bortun & Matei, 2017).

Patients with dependent personality tend to rely on others both emotionally and decision-wise. Faced with rejection, their feeling of abandonment switches to anger. The idea of being independent terrifies them and they always seek to maintain a continuous relation with their healthcare provider. To deal with these patients, there needs to be a firm approach that keeps patients from going over the line. One way to do is by using coaching techniques that help patients formulate objectives and assume responsibility.

Histrionic patients are known for being emotionally labile with a lunatic mood. They are of dramatic nature and are afraid of exploring their feelings. They can be very nervous and inappropriate at times. Still, they try to present the best image of themselves. To keep the relationship strictly professional, it is critical to put an end to any requests deemed out of line in a polite but strict way and maintain a firm stance.

Narcissist patients are very needy and demand special attention. They don't adhere to typical physician-patient relationships and think their needs always come first. Any neglect on the doctor's side may backfire. The fact that their low self-esteem depends on their constant urge to be admired and respected by others makes it really difficult to deal with their tantrums if they

feel disregarded. There is a possibility for physicians to reach a middle ground without compromising the medical services, but they should also explain to this type of patients why they cannot meet all of their needs by bringing up practical arguments that wouldn't upset them.

Obsessive-compulsive patients are control freaks and have a strong consciousness but struggle with their feelings and feel cornered when their daily routine is compromised. Their morality and high standards can be burdensome for others. In order to avoid a mental breakdown, physicians must accept and understand what this type of patients is going through and should keep an eye on their evolution. Asking them direct questions to learn about their expectations and offering them panoply of options all while asking for their opinion can help communicate with them trouble-free.

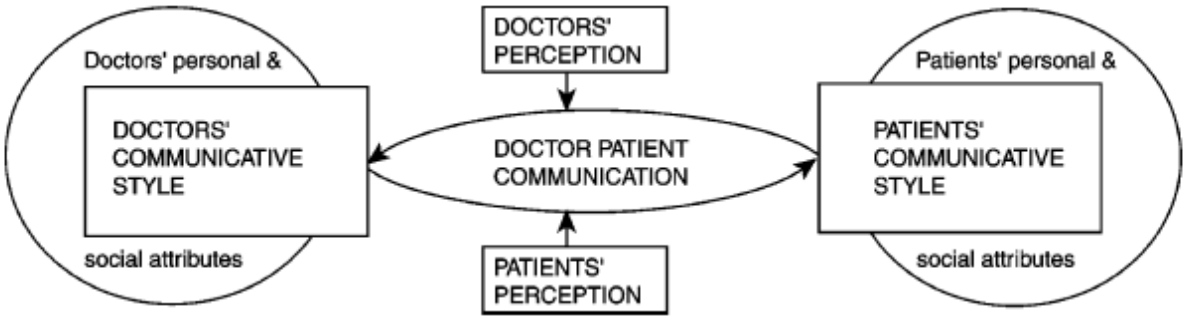
Borderline patients exhibit instability in many aspects of their lives, such as personal relationships, mood swings, impulsive behaviors and so on. They're not assertive about their feelings. Their coping mechanism is weak and they feel neglected. This pattern might resurge where they unconsciously show a paradoxical behavior towards their primary care physician that may discourage them from taking them in charge. Expecting the worse from these patients is one way to be prepared for whatever disappointment might come from them. Likewise, doctors must be ready to reassure these patients' fears and concerns in order to minimize whatever damage may either come from them or be inflicted on them.

Socio-economic status

Social disparity is one of the factors that impact physician-patient relationship. Personal and social attributes such as educational level, age, gender, and anxiety directly influence patients' communicative behavior (Figure 6). Subsequently, this explains the difference between

physicians' and patients' communicative style. For instance, patients from a lower social class don't ask a lot of questions, keep their opinions to themselves, and don't participate in decision making. This results in them receiving a more directive and a less participatory consulting style, which limits their involvement in treatment decisions and restricts their control over communication and information exchange regarding diagnosis and treatment. In parallel, physicians take over the conversation with biomedical talk and incessant questions and focus more on physical examination than anamnesis. In contrast, educated patients are active communicators asking more questions, showing expressiveness, and requesting more information from their physicians all while being more opinionated (Willems et al., 2005).

Figure 6. *Doctor-patient communication* (Willems et al., 2005).



Physicians' involvement

The typology and social status of patients lead to a third factor that is vital to the physician-patient relationship, which is physicians' involvement. Based on the first two factors, physicians decide their degree of involvement in the physician-patient relationship. Thus, the levels of communicating information, issuing directives, exhibiting positive socio-emotional behavior, and engaging in partnership building all depend on the communicative routine physicians would adopt per patient to conduct a consultation. Assumptions regarding patients'

interest in learning about their health or their ability to understand information can also limit or encourage physicians' involvement (Willems et al., 2005).

2.4.3. Communication challenges in healthcare

Health communication is necessary to redefine health problems – namely public health – by breaking down health complexities and conveying proper solutions from a humanistic perspective (Werder, 2017). However, just like in any sector, healthcare is not immune to communication challenges. In fact, communicating errors between healthcare professionals and patients happen every day, with some of them turning out to be life-threatening (Meuter et al., 2015).

Communicational Culture

Communicational culture refers to "principles, values and symbols, rules, rituals and institutions related to communication." These indicators are catalysts for communicational thinking which then translates into communicational behavior. This triple scheme is essential for daily interactions as it creates a community where information, representations, ideas, values, and attitudes are shared. Thus, communication is more than just emitting sounds and words, but it is also founded on thinking and knowing, such is the case of language (Bortun & Matei, 2017).

Establishing a healthcare-oriented communicational culture still represents many obstacles for physicians and patients alike, such as discontinuity of care, compromise of patient safety, inefficient use of valuable resources, patient dissatisfaction, physician burnout, and so on. Working on developing a language that facilitates interactions between the two parties is highly solicited especially with the current progress in the medical field (Vermeir et al., 2015).

Time

Time is of the essence and can be used either as a barrier or a facilitator to successful communication. Its setbacks result in some healthcare providers thinking that communication takes too long or is a waste of time, due to which they choose to skip communicating with their patients altogether (Hemsley et al., 2011).

Medical Errors

To err is human, but medical errors must be avoided at all costs. Medical errors happen when healthcare or technical mistakes occur but aren't prevented nor intercepted in time. This is due to a huge lack of communication within the medical staff and with the patient. Putting an end to medical errors won't happen by identifying culprits or limiting responsibilities, but rather by prioritizing patient safety and improving patient care through openness and honesty; which are two communication tools that are unfortunately yet to be practiced on a large scale. (Noland & Carmack, 2014; Lehr & Bosman, 2015).

Resistance to health messages

It's no secret that patients often disregard doctor's orders despite seemingly being reasonable people. Contrary to popular belief, health resistance has nothing to do with lack of understanding or access issues; but it is basically the outcome of lack of motivation to comply with medical instructions (Werder, 2017).

Other challenges

Lack of awareness, insufficient knowledge, and poor communication skills are but a few challenges that healthcare providers face in their daily practice. When left unresolved, the

consequences of these setbacks can be severe in terms of physician reputation and patient safety and satisfaction (O'Halloran et al., 2011).

2.5. The relationship between evidence-based communication and healthcare

Evidence-based medicine and evidence-based practice are concepts that have been used for decades to establish clinical guidelines based on the systematic analysis of research evidence used in clinical reasoning and decision making. This ethical approach promotes practice standardization, optimal patient care, and practitioner job satisfaction and empowerment (Jaana et al., 2014; Holdforth, 2017).

Since the "evidence base" concept is dominating the clinical environment, it was only a matter of time for evidence-based healthcare management to surface (Jaana et al., 2014). With communication being a crucial element in delivering medical practice, the notion of evidence-based communication saw the light of day (Henry et al., 2013; Lehr & Bosman, 2015).

2.5.1. Evidence-based practice and evidence-based communication

The term evidence-based medicine was coined in literature in the early 1990s by David Sackett, whose definition is by far the most widely used to this day, which states that "Evidence-based medicine is the integration of best research evidence with clinical expertise and patient values." Later, evidence-based medicine was renamed as evidence-based practice since other professions, namely healthcare, adopted the definition for their own use. The evidence-based practice model (figure 7) is described through five iconic steps which are (1) identifying the problem; (2) accessing the best evidence; (3) critically appraising the evidence; (4) applying the change to practice; and (5) evaluating the change in practice (Mackey & Bassendowski, 2017; Stannard, 2019).

Figure 7. *The five steps of Evidence-based practice (Stannard, 2019).*

Inspired by evidence-based practice, evidence-based communication has become a popular concept in healthcare management and was developed and adapted as a strategy in clinical practice to establish an effective and productive communication with patients (Bumb et al., 2017). It's a competency-based approach that implements communication skills in an efficient manner to deliver safe, effective patient care. Table 2 shows 12 evidence-based communication competencies that are taught in graduate medical education (Henry et al., 2013).

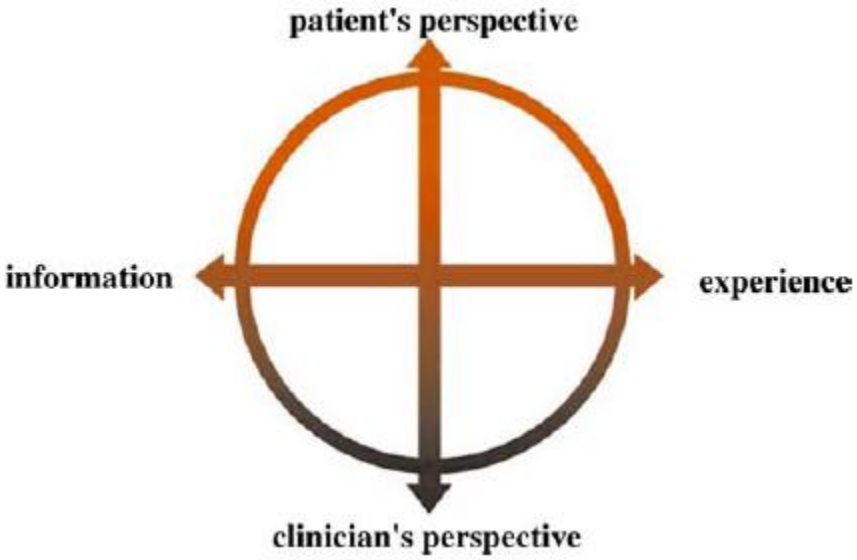
Table 2. *Evidence-based communication competencies taught in graduate medical education (Henry et al., 2013).*

Skill level	Competency	Assessable performance related to this competency
Basic	Ability to take accurate and complete patient histories	Seeing new patients in clinic, patients admitted with new problems
Basic	Ability to communicate with other doctors	Conducting inpatient handoffs, transitions of care in the emergency department
Basic	Ability to communicate with other members of the health-care team	Coordinating inpatient procedures, planning patient care with outpatient clinic staff
Basic	Ability to set agendas with patients	Setting agendas during clinic visits, managing patients' expectations
Intermediate	Ability to assess and improve patient adherence	Assessing adherence to blood pressure medications, adherence to fluid restrictions
Intermediate	Ability to deliver diagnostic and prognostic news	Delivering new inpatient diagnoses, communicating test results
Intermediate	Ability to elicit patients' beliefs, perspectives, and concerns about illness	Eliciting whether patients believe medications are working, patients' beliefs about the cause of their illness
Intermediate	Ability to communicate treatment plans	Explaining medications during hospital discharge, describing medicine changes in clinic; explaining the rationale for procedures and operations
Complex	Ability to establish patient rapport and demonstrate empathy	Building rapport during initial surgical consultations, rapport over time in continuity clinics
Complex	Ability to manage conflict and negotiate with patients	Responding to patient requests for unnecessary tests or medications; negotiating treatment goals for chronic disease management
Complex	Basic patient counseling skills	Promoting smoking cessation, weight loss, or medication adherence
Complex	Counseling families and caregivers	Conducting a family meeting; counseling caregivers of an Alzheimer's patient

2.5.2. Evidence-based communication models

When physicians are faced with communicational difficulties, there are key elements forming a "communication compass" that redirects these difficulties and transforms them into a language that restores communication in the physician-patient relationship. Two axes form the communication compass (Figure 8): one axis designates the perspectives of both the clinician and the patient, and the other axis indicates the content of information and emotional experience (Maex & De Valck. 2006).

Figure 8. *Communication compass (Maex & De Valck. 2006).*



In healthcare, successful communication depends on the readiness to communicate and reaching mutual understanding in order to focus on delivering optimal health outcomes (Maex & De Valck. 2006). Evidence-based communication plays a big role in guaranteeing optimal health outcomes. Thus, many evidence-based communication models have been introduced throughout the years.

Clinical reasoning

Clinical reasoning is a context-dependent complex model that contains five core processes: (1) active listening (paying attention to details and knowing when to interrupt,) (2) framing and presenting the message appropriately (decoding rapid and/or subconscious thoughts to deliver in a limpid manner,) (3) matching the co-communicator (in terms of language and jargon to send a message that suits the needs of the co-communicator,) (4) metacognition (monitoring the communication and adapting it to make sure the message is understood and the chosen language is appropriate, and (5) clinical reasoning ability (Awareness of and competence

in clinical decision making.) Given the dynamic nature of communication, a constant interaction and overlap between these five themes is necessary and should become habitual (Ajjawi & Higgs, 2012).

Four rehab communication elements

Rehab communication is comprised of four key functions that link detached aspects of communication to rehabilitation outcomes via a set of arbitrating variables. These elements/functions are (1) knowing the person and building a supportive relationship, (2) effective information exchange and education, (3) shared goal setting and action planning, and (4) fostering a positive, yet realistic, cognitive and self reframing (Jesus & Silva, 2015).

The first element is knowing the person and building a supportive relationship, which can be achieved by continuously building a rapport and trustful alliance when interacting with patients by showing respect, interest, and empathy and practicing active listening, thus opening the door to further information exchange, shared decision-making and emotionally supportive interactions. A successful implementation of this element shows in achievement patient adherence to treatment.

Next is effective information exchange and education, which focuses on gathering information by using communication strategies like using open-ended questions, directly eliciting clinical symptoms, and reflective listening while reassuring the patient and adapting the situation to their attitudes, values and personal circumstances. On the other hand, education can take place by providing relevant medical information to their current health condition and asking them to rephrase it to assess their degree of assimilation of the situation at hand all while being empathetic throughout the entire process.

As for shared-goal setting and action planning, it's a process that brings physicians and patients together for an open discussion to define and eventually agree on rehabilitation goals. This process requires collaborative interactions guided by a collaborative communication based on shared knowledge and deliberation of the provider's clinical decision-making and the patient's preferences. Once the two agree on a common mindset following the shared process, rehabilitation goals are finally set and can be adjusted later to meet patient's needs, and are engaged into a shared action plan that is fully endorsed by collaborative communication.

Finally, fostering a positive, yet realistic, cognitive and self-reframing involves encouraging patients' cognitions to a more adaptive therapeutic engagement and psychosocial adjustment toward disability by stimulating motivation, self-awareness, and self-efficacy, maintaining a healthy empathetic communication, and reinforcing restoration-oriented mindsets.

SPIKES Model

The SPIKES model is one of several evidence-based models that have been developed and adapted for nursing clinical practice when delivering bad news to the patient and family. The mnemonic defines a structured process that directs health care professionals in taking on difficult discussions. S is for setting and refers to choosing a secluded area to show respect and empathy for the patient and family prior to sharing information. Perception relies on deducing whether the patient understood the circumstances of the situation before communicating the bad news to them. Information or Invitation designates the amount and type of information to share with the patient and family according to their needs and reactions. Knowledge indicates the moment when the bad news is revealed, followed by sharing the plan of care in a direct, honest, and easy language without using medical jargon. The healthcare provider then asks the patient and family

what they understood and they offer them additional explanation regarding any ambiguities. Empathy is crucial in situations like these and should be practiced diligently in a way that acknowledges the patient and family emotions. Strategizing or summarizing is the final step of the SPIKES process where the healthcare provider sums up the divulged information in an understandable language and then discusses the care management plan and treatment options with the patient and family (Bumb et al., 2017).

Doctoring

The idea behind the humanistic model of health communication is that the core of communication is about sharing of meaning. An example would be doctoring, labeled as "the art of medicine." Doctoring calls for a set of communication skills, empathy, self-awareness, judgment, professionalism and mastering the social and cultural context of personhood, illness and healthcare. Since humanistic communication perceives communication as a dialogue between physicians and patients as equal partners, personal values and responsibilities, spirituality, culture and self-actualization should all be taken into consideration with the same relevance towards the usual constructs of attitudes, normative adherence, self-efficacy and cognitive learning ability. In this context, doctoring endorses equality in the physician-patient relationship by implementing human communication as a dialogical process that breaks down the reason behind people resisting a message rather than forcing a one-directional instructional statement that receives behavioral compliance as the only feedback (Werder, 2017).

2.5.3. Evidence-based communication and patient-centered care

All evidence-based communication models mentioned in the previous segment have one thing in common: they strongly promote healthcare to become patient-centered. In fact, patient-

centered care is a multifaceted process that is both a goal and a tool for improving health outcomes that has been around for a long time, but it wasn't until the 1980s that the Picker Institute made it mainstream and introduced it as "care that is organized around the patient, where providers partner with patients and families to identify and satisfy the full range of patient needs and preferences." (Picker Institute, n.d.; Cheraghi et al., 2017; Parse, 2019).

Furthermore, eight principles of patient-centered care focusing on improving healthcare safety, quality, and coordination, as well as quality of life, were introduced: (1) respect for patients' values, preferences and expressed needs, (2) involvement of family and friends, (3) coordination and integration of care, (4) information, communication and education, (5) physical comfort, (6) emotional support and alleviation of fear and anxiety, (7) transition and continuity, and (8) access to care (The American Geriatrics Society, 2016; Ortiz, 2018).

The patient-centered care model designates the ability to provide individual care to every patient via personalized care including shared-decision making, motivational interviewing and health coaching, and advocacy. This calls for the incorporation of evidence-based communication in order to use the best evidence and techniques to effectively communicate, assess, counsel, and negotiate with patients, thus building a solid physician-patient relationship (Starr et al., 2017).

Now, merging evidence-based communication and patient-centered care results in what we call patient-centered communication, which "invites and encourages the patient to participate and negotiate in decision-making regarding their own care." This type of communication is the most consistently defined component of patient-centered care and has proven to be vital for patients because it involves them as a part of the solution rather than making them feel like a mere clinical case that needs to be solved (McCabe, 2004; Constand et al., 2014).

Finally, a selection of the best interventions that bring evidence-based communication and patient-centered care together are divided into seven categories, which are (1) supporting decision process and evidence-based practice; (2) providing patient-centered approaches; (3) supporting patient self-management; (4) providing case/care management; (5) enhancing interdisciplinary team approach; (6) developing training for healthcare providers; and (7) integrating information technology (Poitras et al., 2018; Kristjansdottir et al., 2020).

Despite the challenging nature of the patient-centered care model in health care delivery, its implementation is valuable and should be emphasized in medical education from both a psychosocial and medical perspective to teach medical students the necessary communication competencies to engage with patients following the patient-centered approach (Boggiano et al., 2017; Powers et al., 2019).

2.6. Conclusion

Coordination depends heavily on a direct and effective communication and is a consistent behavioral trait across all communication treatments. In healthcare, the more communication is informative in the physician-patient relationship, the better health outcomes will be (Vorobeychik et al., 2017).

This being said, communicating for public health is essential to redefine healthcare delivery (Werder, 2017). Practicing various evidence-based communication models and competencies are set to bring healthcare professionals one step closer to achieving patient-centered care, thus ensuring optimal healthcare management that would put patients' well-being first and health resistance to rest.

Chapter Three : Methodology

3.1. Introduction

One way to achieve patient-centered care is by implementing evidence-based communication. The aim of this study is to define the relationship between evidence-based communication and patient-centered care in the dental healthcare sector in Morocco. Thus, the following objectives are set:

- To find out how effective communication is in the dental healthcare sector in Morocco.
- To identify the common communication skills practiced by Moroccan dentists.
- To describe the impact of a good evidence-based communication on health outcomes in dentistry.

In order to achieve the objectives above and confirm or refute the hypothesis stating that evidence-based communication contributes to optimal healthcare delivery, this study was conducted to collect data about factors that play an important and binding role between efficient communication competencies and good health outcomes.

3.2. Sample

The sampling technique we opted for to conduct our study is probability sampling where we selected a simple random sample. Therefore, our sample size consists of 229 Moroccan dentists from both private and public dental health sectors. All participants gave their consent (Annex 1) prior to answering the survey questionnaire. Their participation was voluntary and explanations were provided when needed.

3.3. Method

Our descriptive study was conducted online from March 24, 2020 to June 18, 2020 using a survey questionnaire (Annex 2) comprised of a set of detailed close-ended questions targeting the dental healthcare sector in Morocco. The questionnaire was created using the Google Forms tool and shared with fellow dentists via both direct messages and in Dentistry groups on Facebook for data collection. Due to the fact that Dentistry is taught in French in Morocco and the majority of dentists are more proficient in French than English, the questionnaire was translated to French (Annex 3) to facilitate data collection.

The questionnaire contains five segments:

- Socio-demographic characteristics of the sample: age, gender, and dental healthcare sector.
- Diagnosis accuracy and adherence to treatment: anamnesis, diagnosis and treatment success rate, post-operative complications, and patient cooperation.
- Patient satisfaction and safety: communication skills, medical checkups, communication errors, and patient complaints.
- Team satisfaction: staff communication, staff complaints, staff training, and communication with other healthcare professionals.
- Malpractice risk: dental records, medical history update, deontology.

3.4. Data analysis

The findings of this quantitative research are displayed via graphs – diagrams and bars – using the Microsoft Office EXCEL software. Data analysis was established through the description, interpretation, and comparison of the descriptive statistics displayed in the form of

percentages which show the stance of participants regarding the content of the close-ended questions. Four themes are identified: diagnostic accuracy and adherence to treatment, patient satisfaction and safety, team satisfaction, and malpractice risk.

3.5. Limitations

Due to the Corona pandemic outbreak, reaching out to dentists through their customized Facebook groups was difficult since the survey questionnaire post was often left unnoticed in comparison to other posts discussing the impeding impact of COVID19 on the dental healthcare sector.

3.6. Conclusion

Our descriptive study is based on quantitative research that was conducted via a close-ended survey questionnaire on a simple random sample comprised of 229 dentists practicing in Morocco. Data collection and analysis were based on the responses retrieved from our sample size using tools such as Google Forms and Microsoft Office EXCEL respectively.

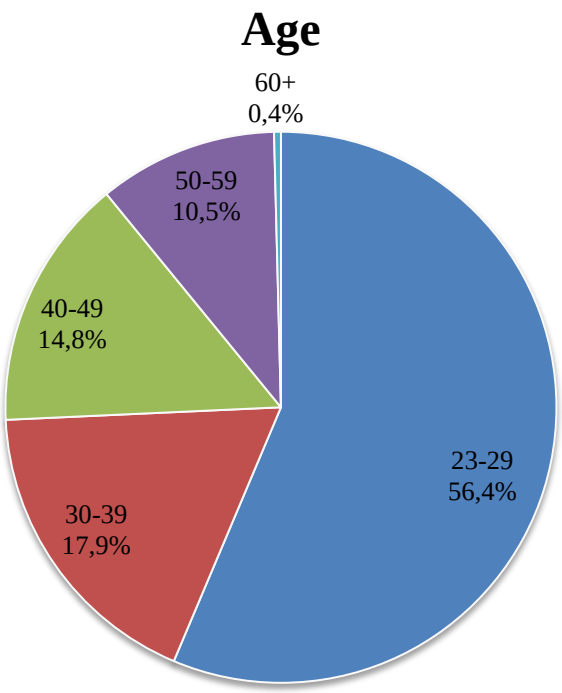
Chapter Four: Findings

4.1. Introduction

The following findings define a series of factors that are crucial in establishing a healthy physician-patient relationship as well as with fellow staff and other healthcare professionals; and depend on a set of communication competencies that reflect the concept of evidence-based communication and help deliver patient-centered care.

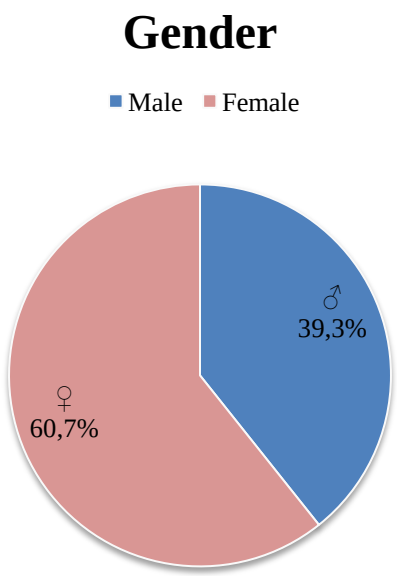
4.2. Socio-demographic characteristics of the sample

Figure 9. *Age of participants*



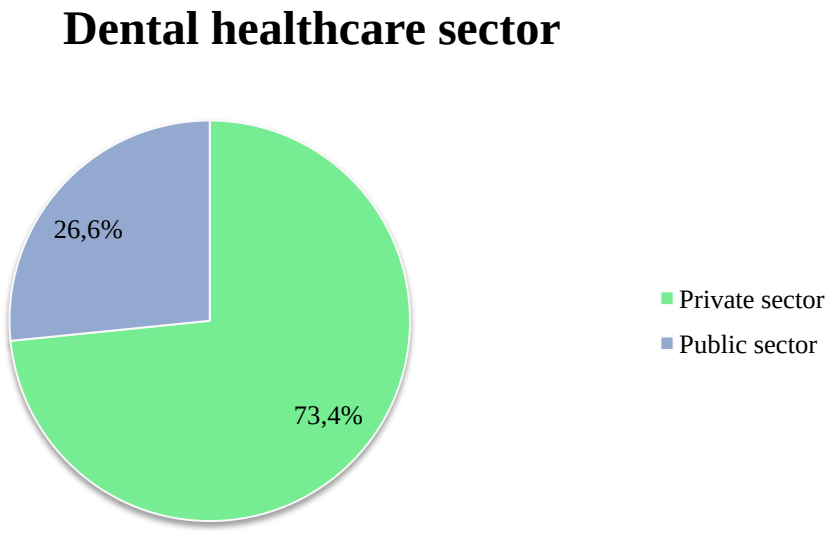
The age of participants ranges from 23 to 60+ years old. The majority (56.4%) is aged between 23 and 29 years old. Only one dentist over 60 years old took the survey questionnaire.

Figure 10. *Gender of participants*



Out of 229 participants, 60.7% (139) dentists are female and the remaining 39.3% (90) are male.

Figure 11. *Dental healthcare sector of participants*

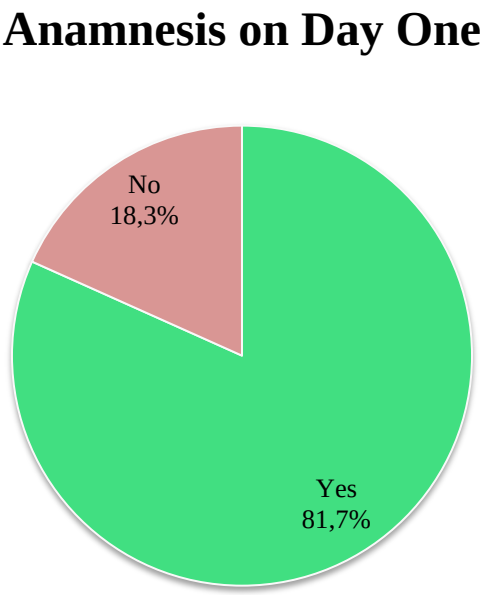


73.4% (168) dentists work in the private sector while 26.6% (61) practice in the public sector.

4.3. Diagnosis accuracy and adherence to treatment

Anamnesis

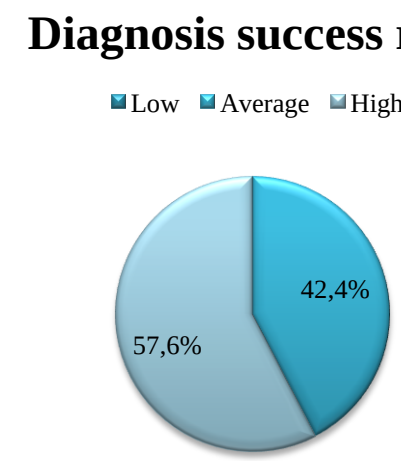
Figure 12. *Anamnesis completion on the first day*



81.7% (187) of the participants conduct a thorough anamnesis on the first day whereas 18.3% (42) of the participants don't.

Diagnosis success rate

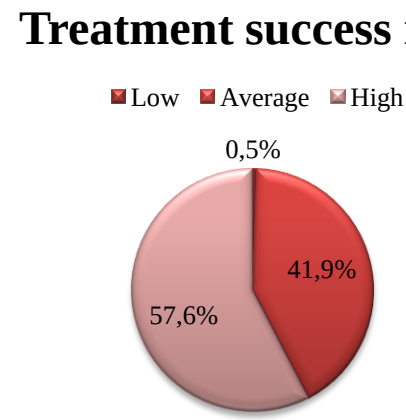
Figure 13. *Diagnosis success rate*



57.6% (132) of the participants reported having a high diagnosis success rate. The remaining 42.4% (97) reported having an average diagnosis success rate. No participant reported low diagnosis success rate.

Treatment success rate

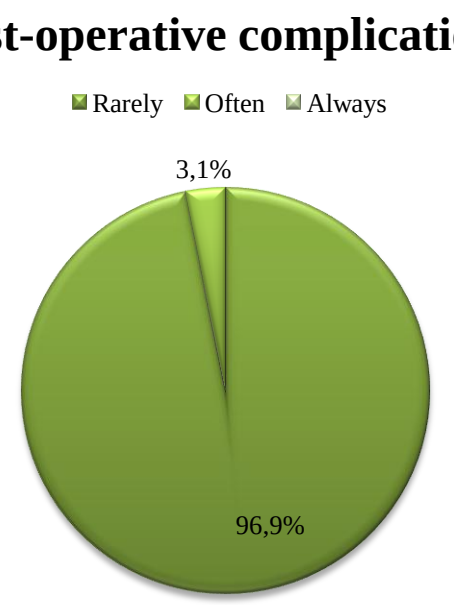
Figure 14. *Treatment success rate*



57.6% (132) of the participants reported having a high treatment success rate. The remaining 41.9% (96) reported having an average treatment success rate. One (0,5%) participant reported having a low treatment success rate.

Post-operative complications

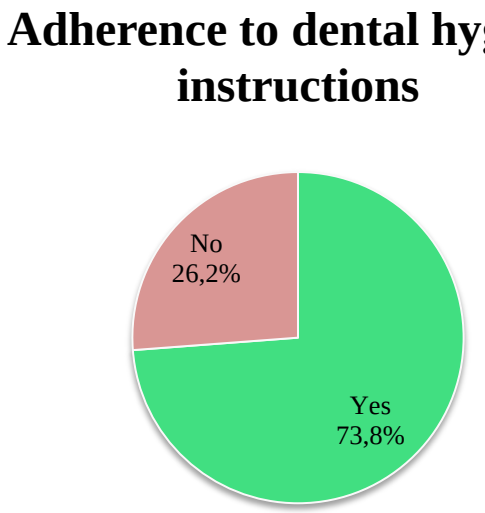
Figure 15. *Post-operative complications*



The vast majority of the participants making 96.9% (222) faced rare post-operative complications following their dental treatments. However, 3.1% (7) of the participants reported facing post-operative complications often.

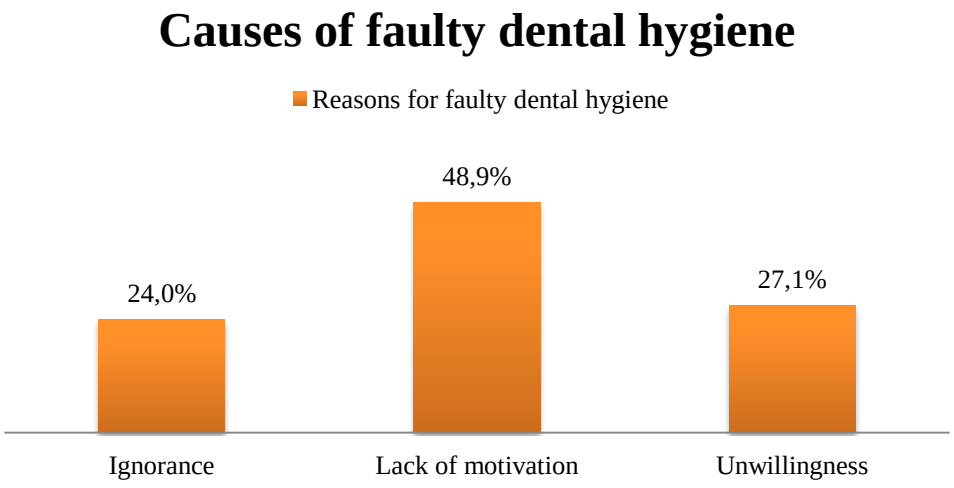
Dental hygiene

Figure 16. *Patients' adherence to dental hygiene instructions*



73.8% (169) of the participants report that their patients adhere to their dental hygiene instructions as opposed to 26.2% (60) whose patients don't follow their dental hygiene instructions.

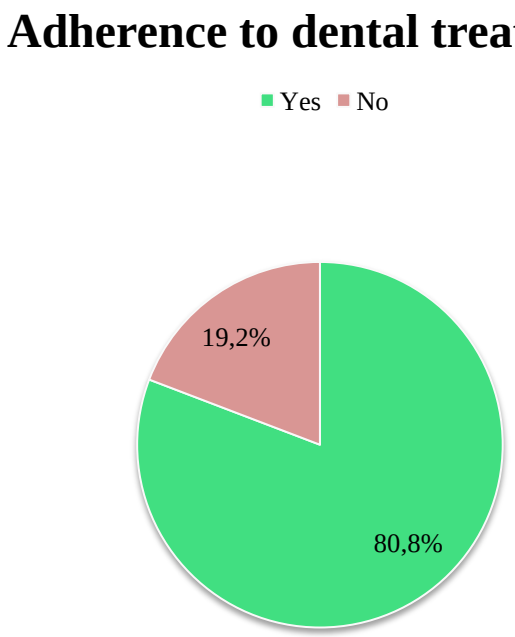
Figure 17. *Causes of patients' faulty dental hygiene*



225 out of 229 participants answered this question. 48.9% (110) of the participants report that their patients' faulty dental hygiene is due to lack of motivation, followed by 27.1% (61) who say their patients' faulty dental hygiene to their unwillingness, while 24% (54) link their patients' faulty dental hygiene to ignorance.

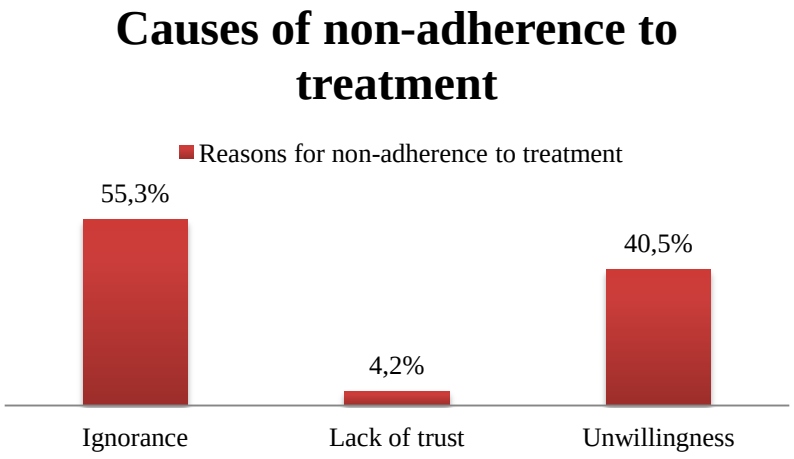
Patient cooperation

Figure 18. *Patients' adherence to dental treatment*



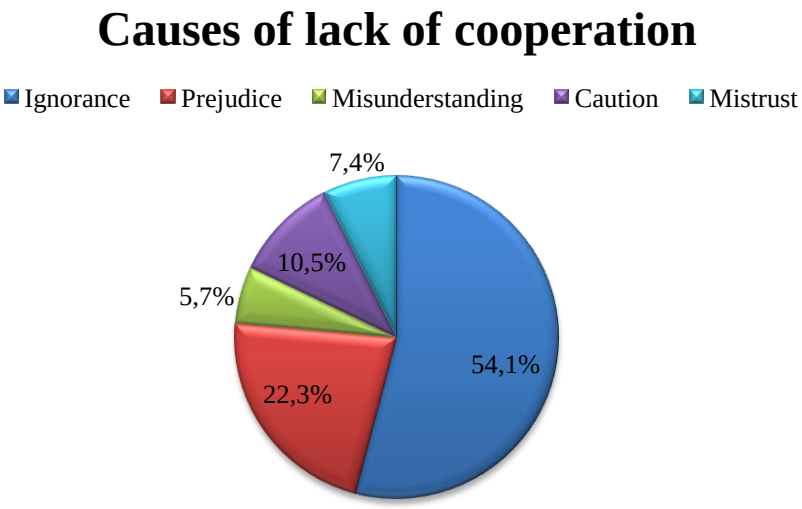
80.8% (185) of the participants report their patients' adherence to dental treatment. In contrast, 19.2% (44) stated that their patients do not adhere to dental treatment.

Figure 19. *Causes of patients' non-adherence to dental treatment*



Only 190 participants answered this question. 55.3% (105) of the participants state ignorance as the reason for patients' non-adherence to dental treatment, while 40.5% (77) of the participants attribute non-adherence to dental treatment to patients' unwillingness. A minority making 4.2% (8) of the participants say lack of trust is the reason patients don't adhere to dental treatment.

Figure 20. *Causes of patients' lack of cooperation*

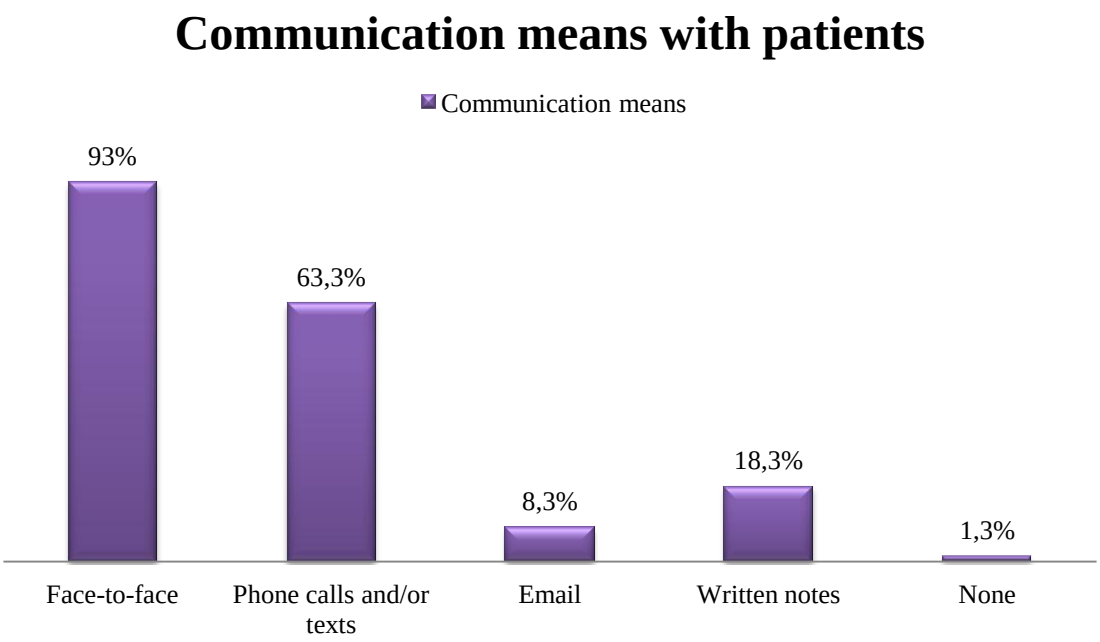


54.1% (124) of the participants attribute patients' lack of cooperation to ignorance, while 22.3% (51) of the participants blame it on prejudice regarding dentists. Meanwhile, 10.5% (24) report caution to be patients' reason behind lack of cooperation whereas 7.4% (17) link the latter to mistrust, and finally 5.7% (13) say it's a matter of misunderstanding.

4.4. Patient satisfaction and safety

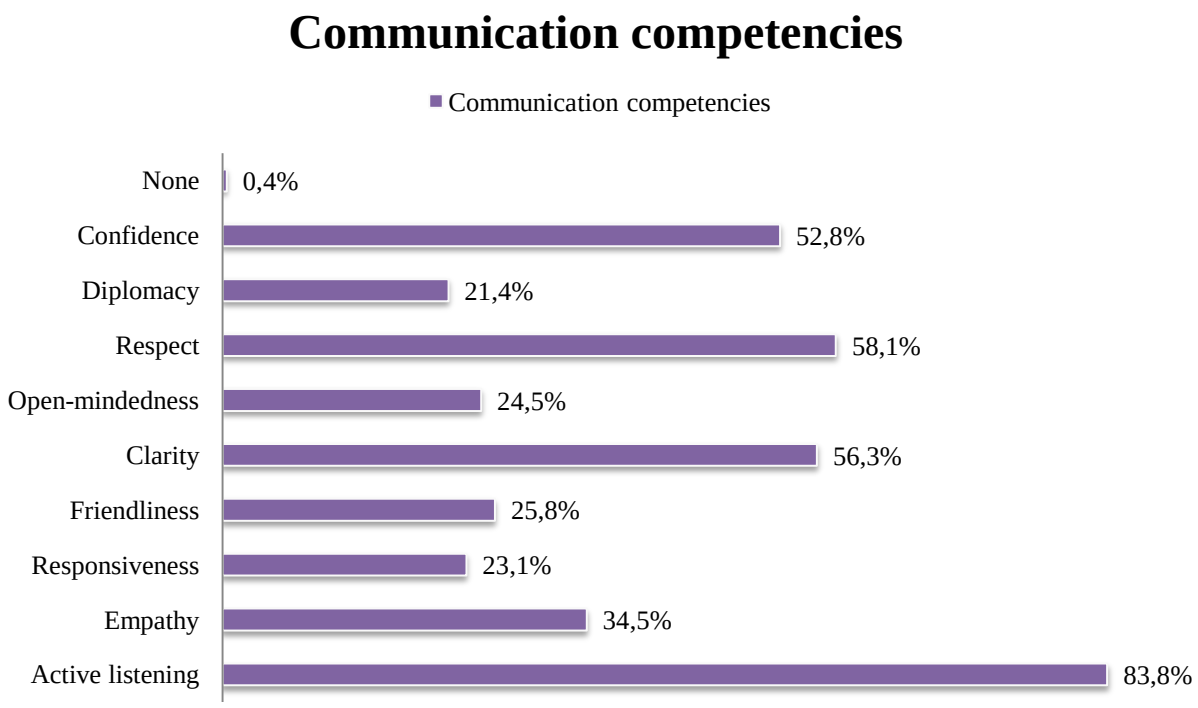
Communication practices

Figure 21. *Communication means with patients*



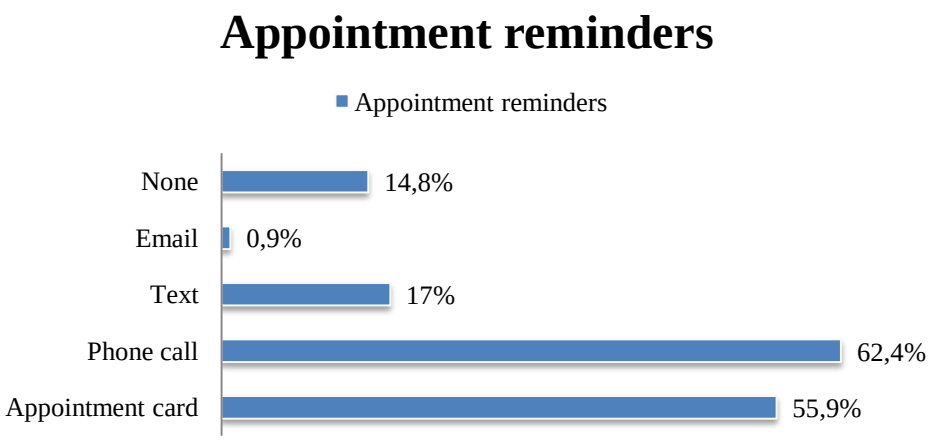
93% (213) of the participants prefer face-to-face communication with their patients, followed by phone calls and/or texts as the communication mean of choice for 63.3% (145) of them. 8.3% (19) choose emails as another mean of communication, while 18.3% (42) mention social media as another mean to use with their patients. Finally, 1.3% (3) do not communicate with their patients.

Figure 22. *Types of communication competencies practiced in the dental office/clinic*



The top three communication competencies practiced according to participants' responses are active listening with 83.8% (192), respect with 58.1% (133), and clarity with 56.3% (129). Confidence comes fourth with 52.8% (121), followed by empathy with 34.5% (79), friendliness with 25.8% (59), open-mindedness with 24.5% (56), responsiveness with 23.1% (53), and diplomacy with 21.4% (49). One participant (0.4%) stated not practicing any of the communication skills aforementioned.

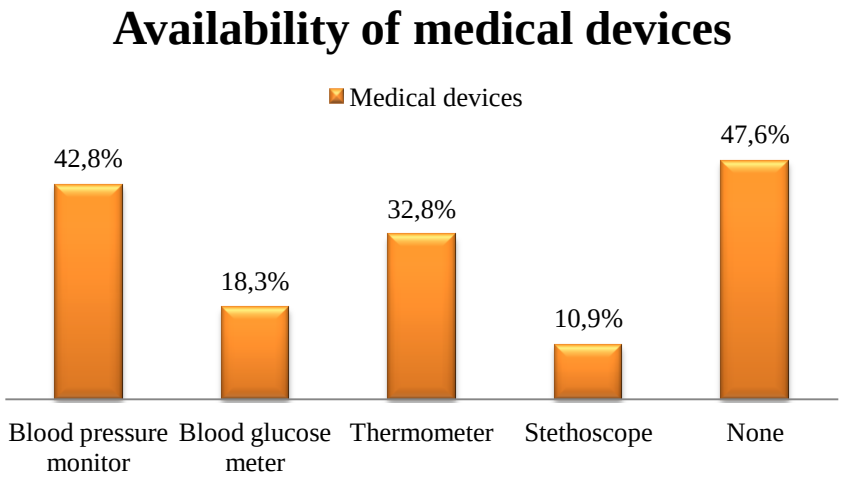
Figure 23. *Means of appointment reminders in the dental office/clinic*



62.4% (143) of the participants remind their patients' of their appointments via phone call. 55.9% (128) of the participants use appointment cards. 17% (39) of the participants resort to texting as an appointment reminder whereas 0.9% (2) of the participants opt for emails. 14.8% (34) of the participants don't remind their patients of their appointments.

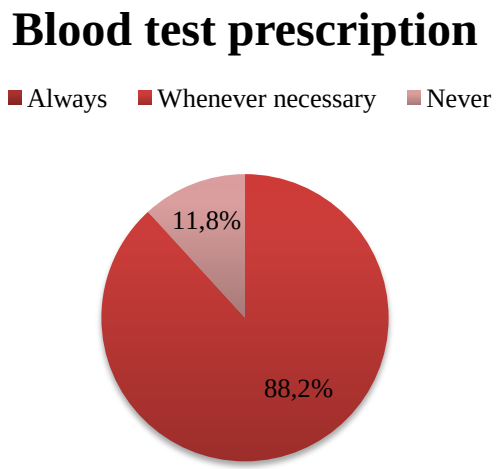
Medical checkups

Figure 24. *Availability of medical devices*



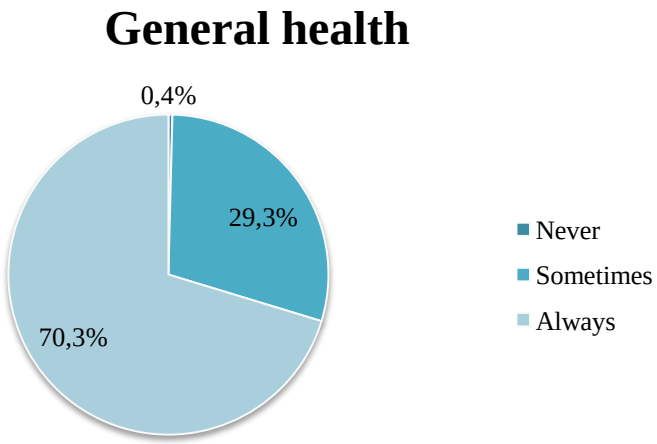
42.8% (98) of the participants own a blood pressure monitor, 32.8% (75) own a thermometer, while 18.3% (42) own a blood glucose meter and 10.9% (25) own a stethoscope. In contrast, 47.6% (109) of the participants don't own any of these medical devices.

Figure 25. *Blood test prescription*



88.2% (202) of the participants prescribe blood tests whenever they deem it necessary, whereas 11.8% (27) never prescribe blood tests.

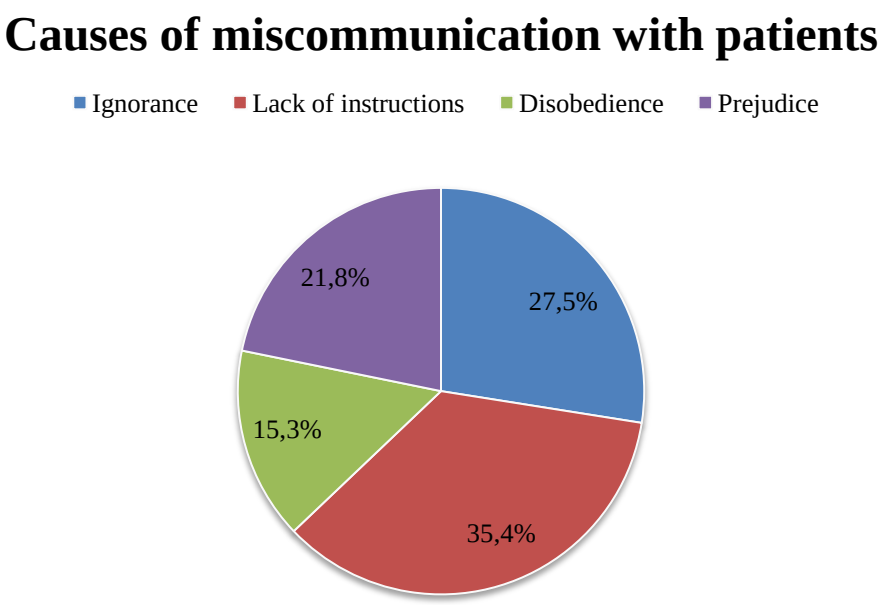
Figure 26. *Follow-up on patients' general health*



70.3% (161) of the participants always check on their patients' general health, while 29.3% (67) of the participants only do it sometimes. One participant (0.4%) never checks on their patients' general health.

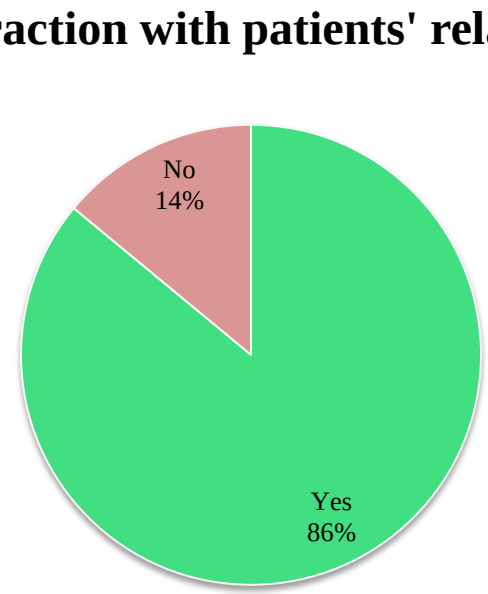
Communication with patients

Figure 27. *Causes of miscommunication with patients*



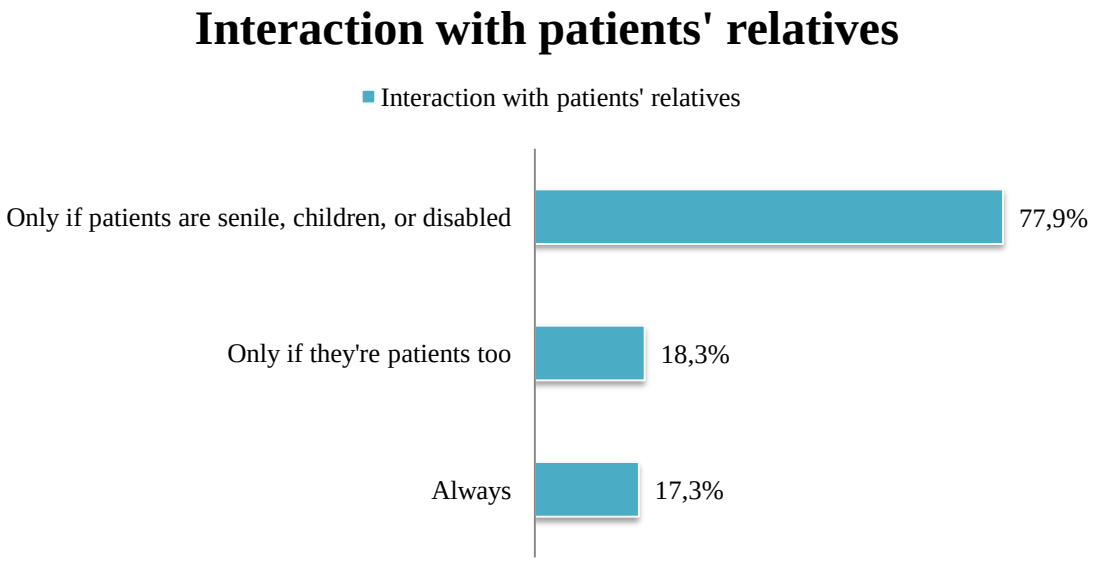
35.4% (81) of the participants state that lack of instructions is the reason for miscommunication between dentists and patients, while 27.5% (63) link it to ignorance. Prejudice is the reason for miscommunication according to 21.8% (50) of the participants, whereas disobedience is the pick for 15.3% (35) of the participants.

Figure 28. *Interactions with patients' relatives*



86% (197) of the participants interact with their patients' relatives while 14% (32) abstain from doing so.

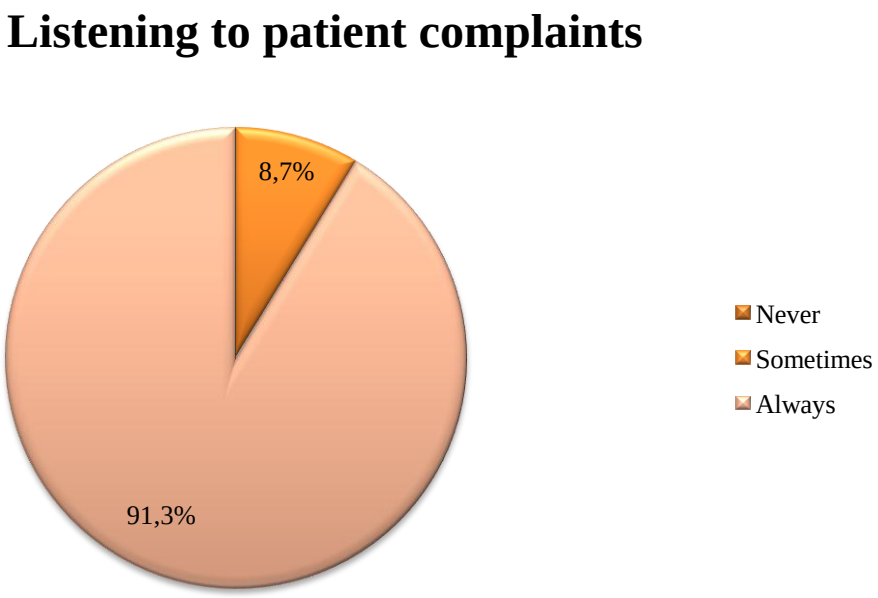
Figure 29. *Circumstances of interactions with patients' relatives*



Out of 208 participants, 17.3% (36) always interact with their patients' relatives, 38 (18.3%) only interact with their patients' relatives if they're also their patients, while the remaining 77.9% (162) solely interact with their patients' relatives if patients are senile, children, or disabled.

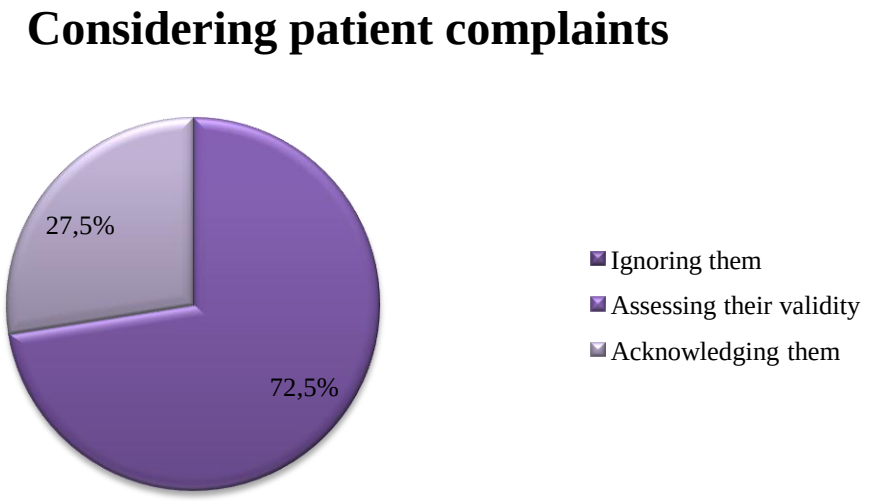
Patient complaints

Figure 30. *Listening to patient complaints*



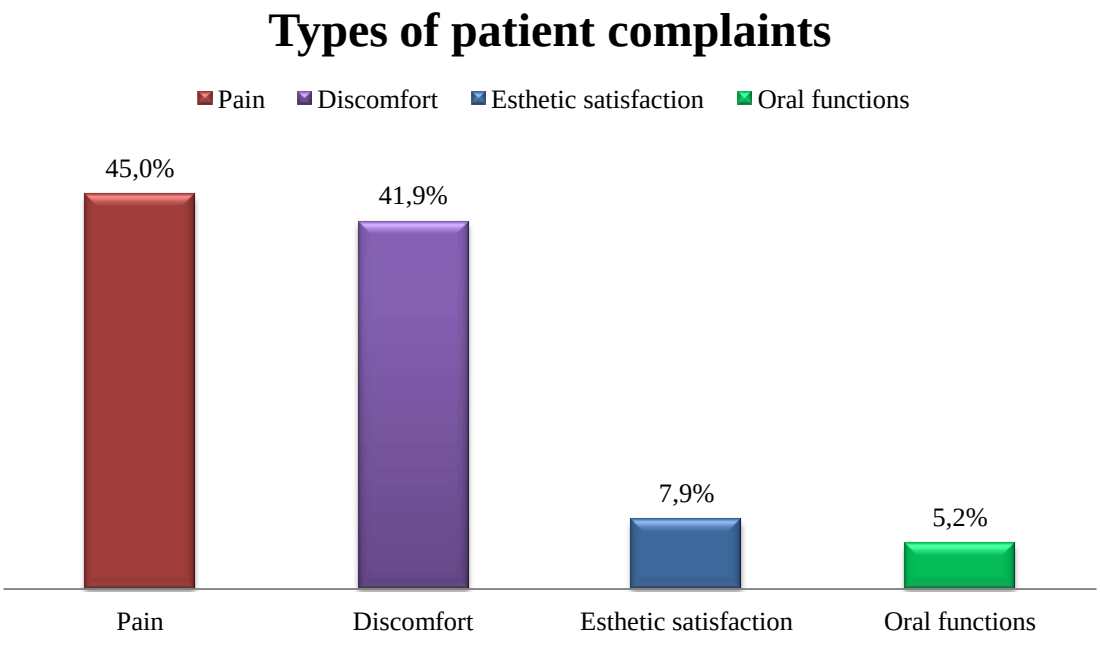
91.3% (209) of the participants always listen to patient complaints, while 8.7% (20) only listen sometimes. None of the participants ignore patient complaints.

Figure 31. *Considering patient complaints*



27.5% (63) of the participants always acknowledge patient complaints while 72.5% (166) assess their validity first before considering them.

Figure 32. *Types of patient complaints*

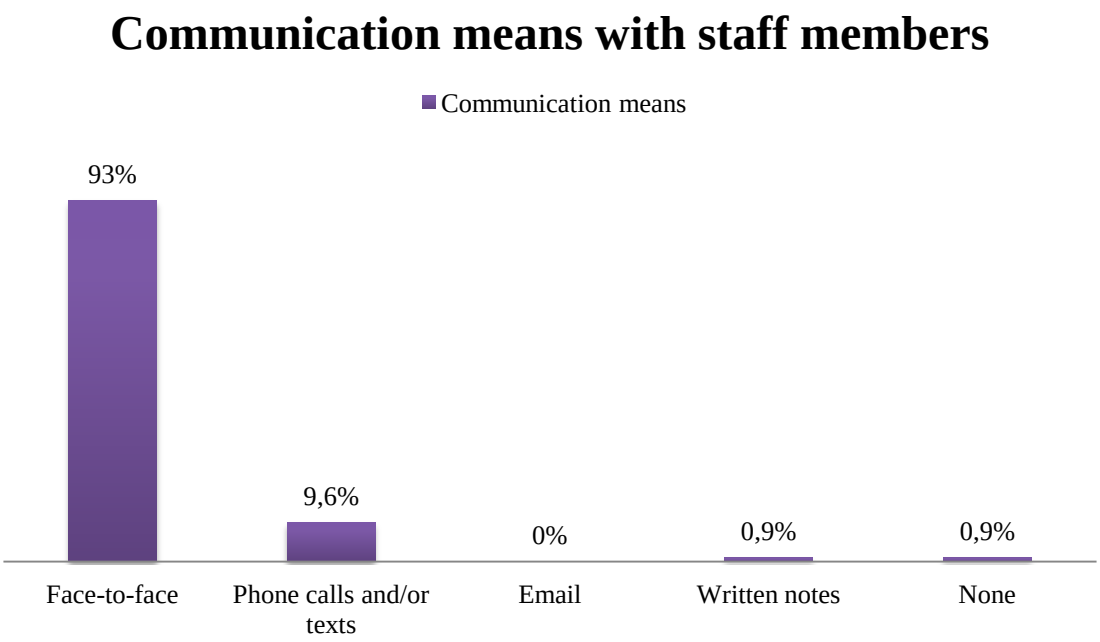


45% (103) of the participants report pain to be the main patient complaint they deal with, whereas 41.9% (96) state discomfort. Esthetic satisfaction is the main type of patient complaint that 18 (7.9%) of the participants receive, while oral functions are the pick of 5.2% (12) of the participants.

4.5. Team satisfaction

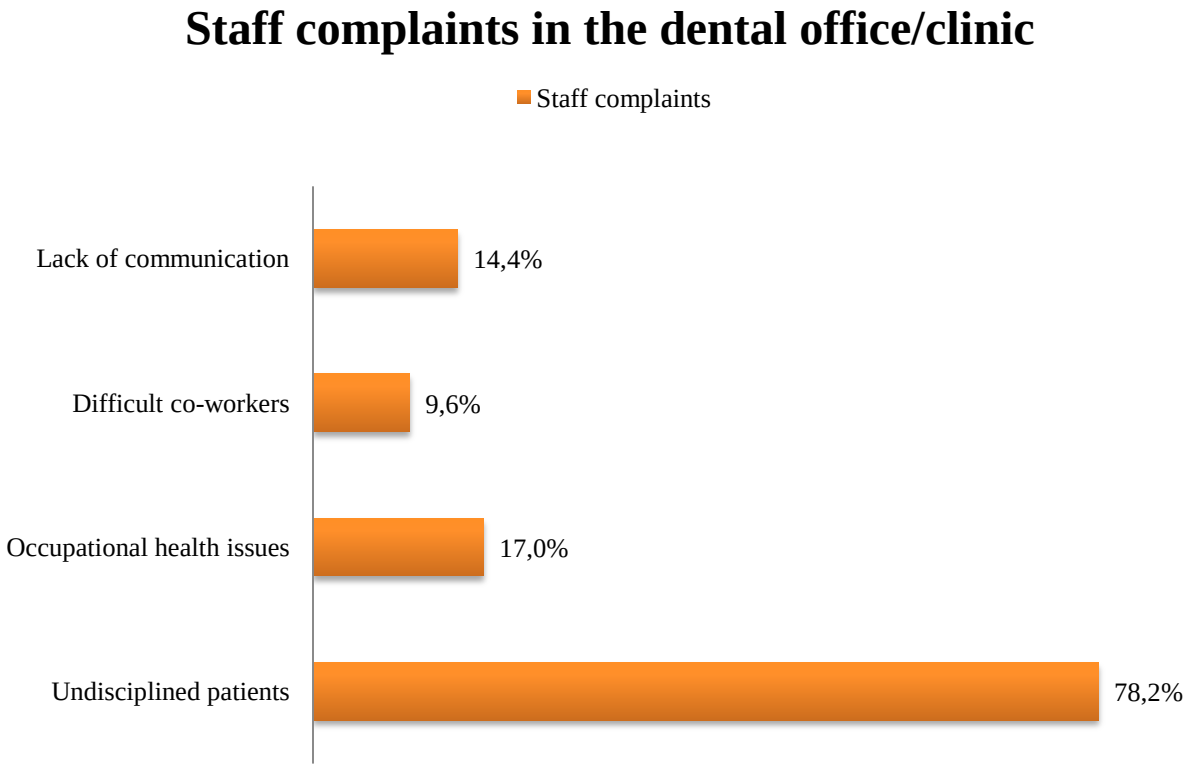
Communication with staff members

Figure 33. *Staff communication*



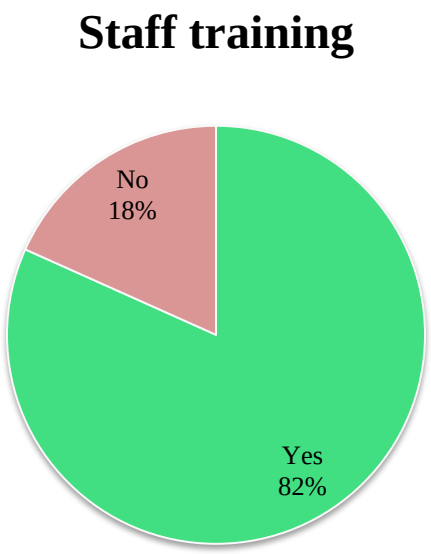
88.6% (203) of the participants prefer communicating with their staff members face-to-face, while 9.6% (22) use phone calls or texting to communicate. Two participants (0.9%) use written notes and another two (0.9%) don't communicate with their staff. None of the participants use emails as a communication mean with their staff.

Figure 34. *Staff complaints*



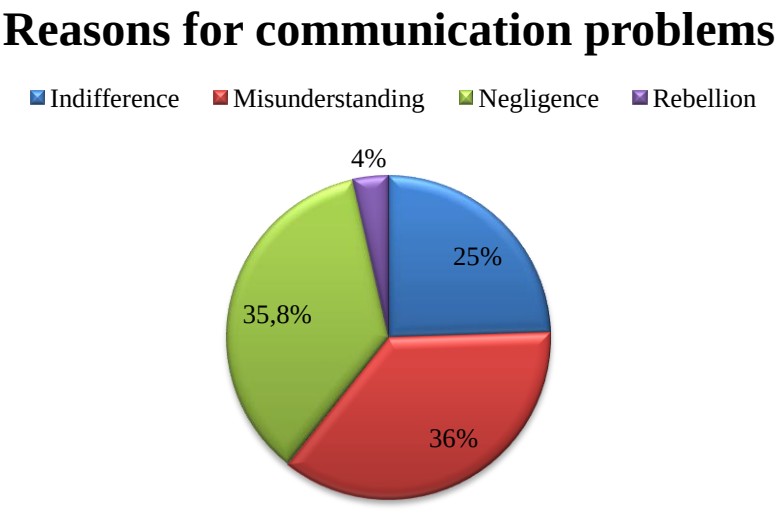
78.2% (179) of the participants report that their main staff complaint is about undisciplined patients, followed by 17% (39) who mention occupational health issues as another staff complaint. Other complaints include lack of communication according to 14.4% (33) of the participants and difficult co-workers according to 9.6% (22) of the participants.

Figure 35. *Staff training*



81.7% (187) of the participants train their staff to properly manage patient problems, needs, and demands, as opposed to 18.3% (42) who don't.

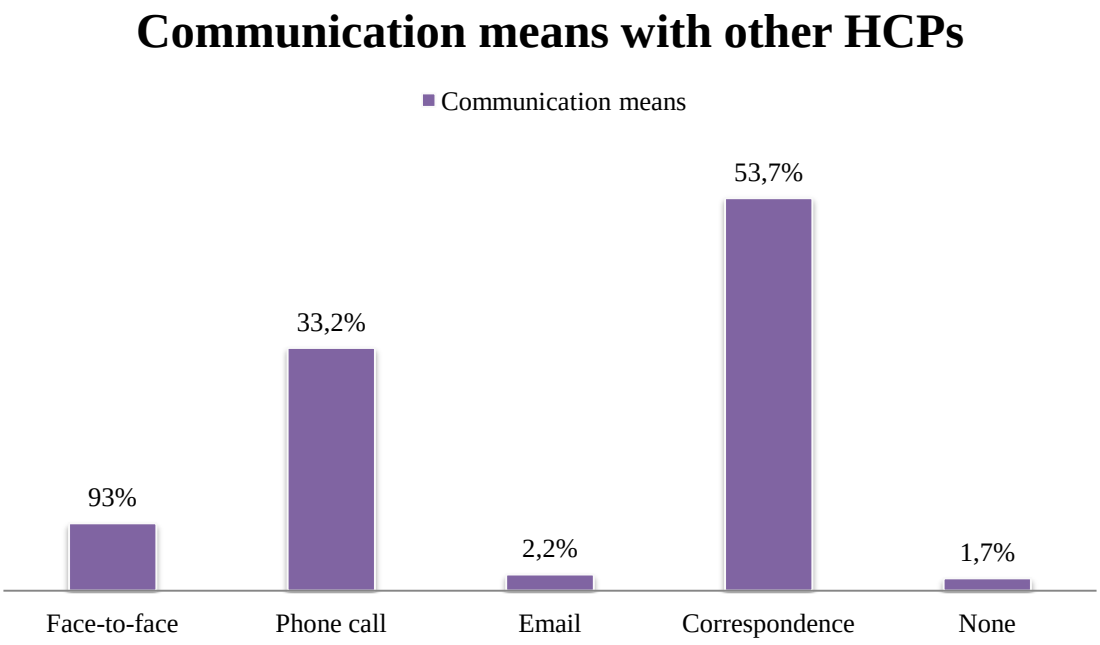
Figure 36. *Causes of communication problems fellow dental staff*



36.2% (83) of the participants report that misunderstanding is what causes communication problems between dentists and their staff, followed by 35.8% (82) of the participants who attribute communication problems to negligence. 24.5% (56) of the participants state indifference as a reason while the remaining 3.5% (8) blame it on rebellion.

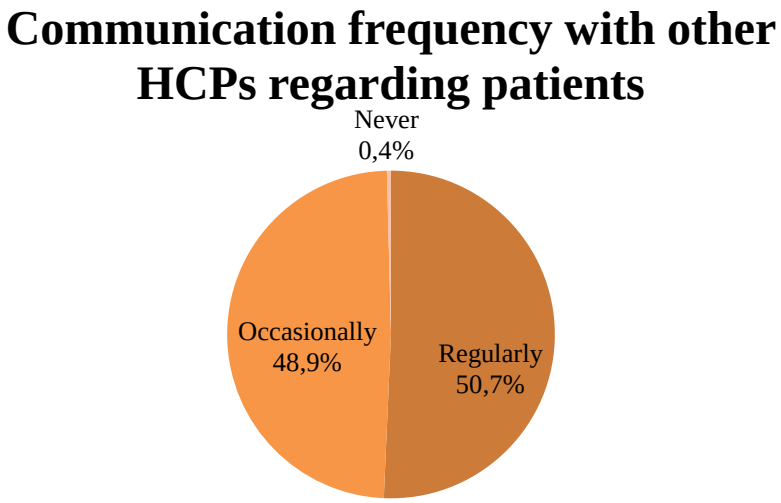
Communication with other healthcare professionals (HCPs)

Figure 37. *Communication means with other healthcare professionals*



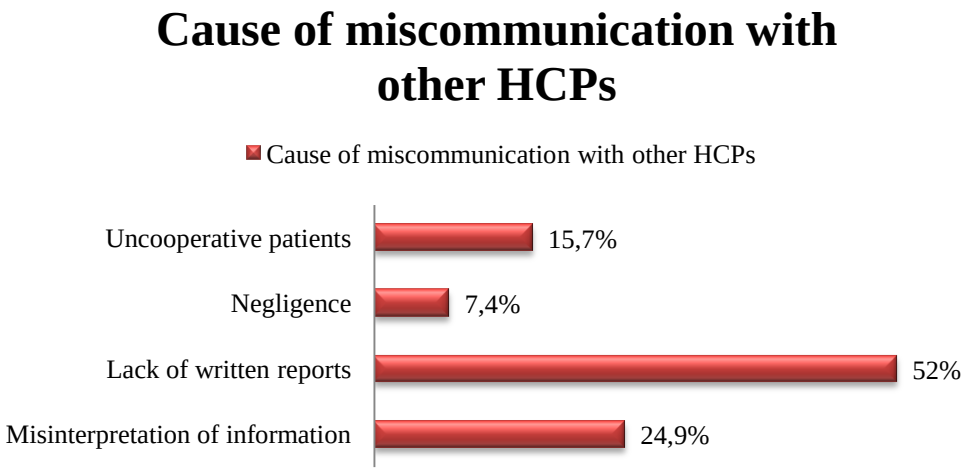
53.7% (123) of the participants use correspondence as a communication mean with other healthcare professionals, while 33.2% (76) prefer phone calls. 9.2% (21) of the participants go for face-to-face communication, and 2.2% (5) opt for sending emails. However, four participants (1.7%) do not communicate at all with other healthcare professionals.

Figure 38. *Communication frequency with other HCPs regarding chronically-ill patients*



50.7% (116) of the participants communicate regularly with other healthcare professionals regarding the health of their chronically ill patients, while 48.9% (112) do it occasionally. One participant (0.4%) never communicates with other healthcare professionals regarding their patients.

Figure 39. *Causes of miscommunication with other healthcare professionals*

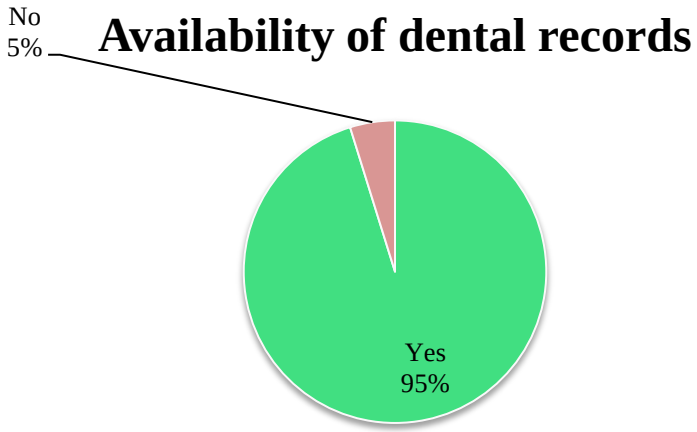


52% (119) of the participants state that lack of written reports if what causes miscommunication with other healthcare professionals, as opposed to 24.9% (57) who report misinterpretation of information as the culprit. On the other hand, 15.7% (36) attribute miscommunication to patients being uncooperative, and 7.4% (17) blame it on negligence.

4.6. Malpractice risk

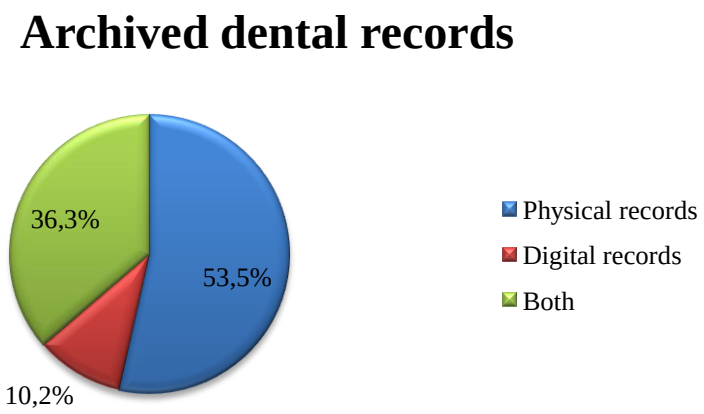
Dental records

Figure 40. *Availability of dental records*



95% (218) of the participants create dental records for every patient that comes in for a consultation in contrast with 5% (11) who don’t.

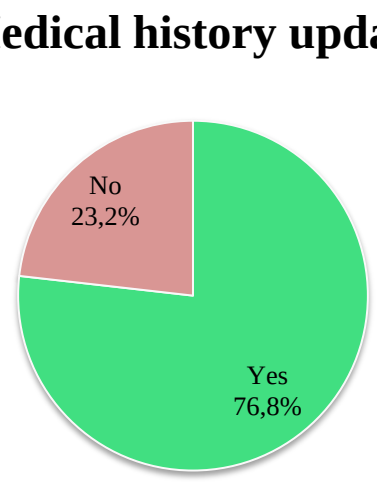
Figure 41. *Archived dental records*



Out of 226 participants, 53.5% (121) archive dental records in the physical form while only 10.2% (23) use the digital form. 36.3% (82) of the participants use both archiving forms.

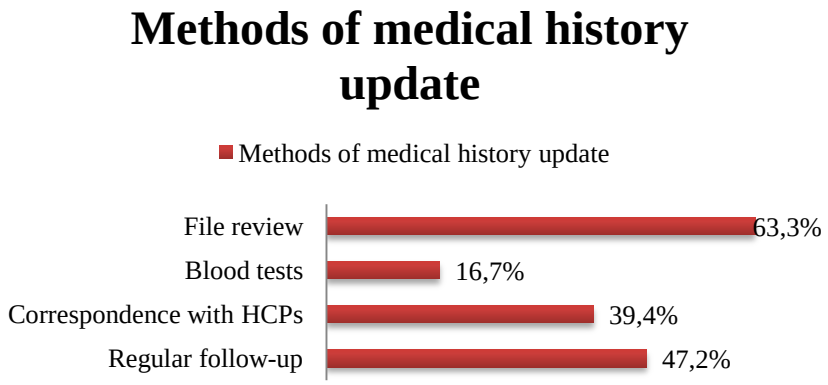
Medical History

Figure 42. *Medical history update*



76.8% (176) of the participants update their patients' medical history regularly. However, 23.2% (53) don't.

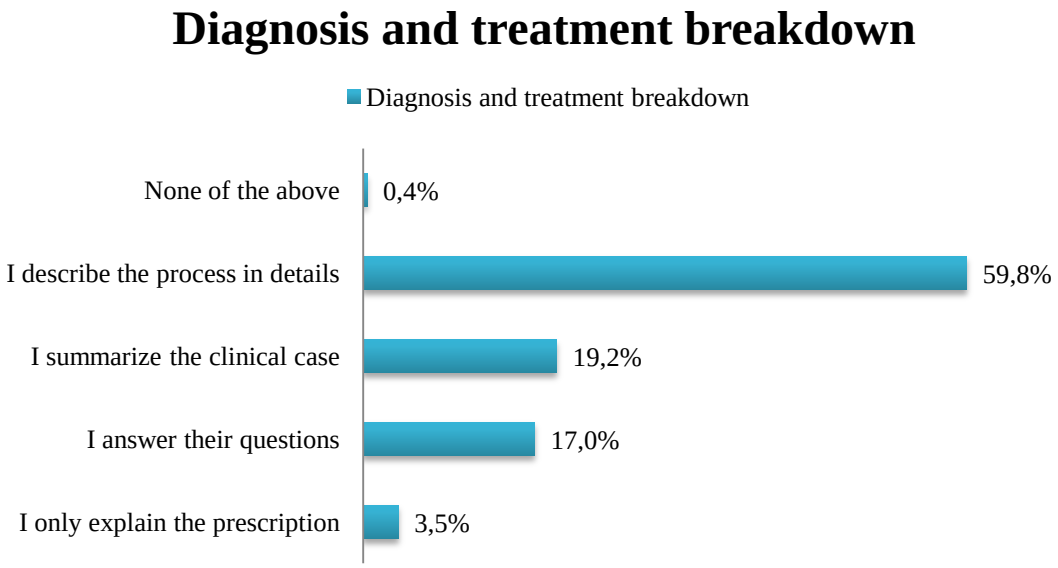
Figure 43. *Methods of medical history update*



Out of 180 participants, 63.3% (114) of the participants review dental records to keep up with their patients' medical history, whereas 47.2% (85) maintain regular follow-ups. On the other hand, 39.4% (71) communicate with healthcare professionals via correspondence and 16.7% (30) prescribe blood tests.

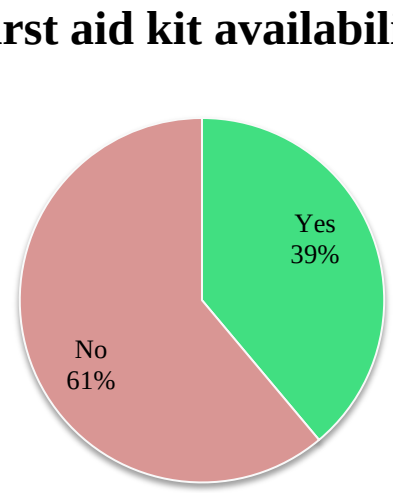
Deontology

Figure 44. *Diagnosis and treatment breakdown*



59.8% (137) of the participants describe the diagnosis and treatment process in detail, while 19.2% (44) summarize the clinical case to their patients. 17% (39) of the participants answer their patients' questions and 3.5% (8) stick to explanation the prescription only. One participant (0.4%) does none of the aforementioned.

Figure 45. *First aid kit availability*



Only 39% (89) of the participants have a first aid kit in their dental office/clinic, as opposed to 61% (140) who don't.

4.7. Conclusion

At first glance, our findings show that both communication competencies and patient-centered care are fairly present in the daily practice of the vast majority of dentists who served as the study's participants. To delve deeper into the relationship between evidence-based communication and patient-centered care, the next chapter discusses our findings in a comparative and contrasting context with those of literature and past studies.

Chapter Five: Discussion

5.1. Introduction

One way to achieve patient-centered care is by implementing evidence-based communication, which is a competency-based approach that implements communication skills in an efficient manner to deliver safe, effective patient care (Henry et al., 2013).

Based on critical thinking, the following discussion's purpose is to confirm or refute the hypothesis stating that evidence-based communication contributes to optimal healthcare delivery, which in turn will help us define the relationship between evidence-based communication and patient-centered care in the dental healthcare sector in Morocco.

5.2. Socio-demographic characteristics

Our sample size consisted of 229 dentists aged from 23 to 60+ years old, with 56.3% being aged between 23 and 29 years old. 60.7% (139) of the dentists were female as opposed to 39.3% (90) male, which indicated their dominance in the field. Finally, 73.4% (168) of the dentists worked in the private sector whereas 26.6% (61) were part of the public sector, thus the majority of participating dentists practiced in the private sector.

The majority of dentists are under 30 years old. This could be explained by the fact that new dentists are graduating every year and older dentists are retiring, with some of them retiring earlier than usual due to occupational health issues (Al-Rawi et al., 2018). As for gender, the proportion of female dentists has been noticeably growing over the past four decades, explaining their current dominance in the field (Rajeh, et al., 2019). Finally, there are more private dental practices than public ones, thus inevitably affecting the quality of dental care received between both sectors (Macarevich et al., 2018).

Based on their personalities, age, and affiliated sector, we could say that young female dentists practicing in the private sector have an interesting profile that is likely to incorporate evidence-based communication in their daily interactions with their patients.

5.3. Diagnosis accuracy and adherence to treatment

Elements that define diagnosis accuracy and adherence to treatment are anamnesis (patient's medical history), diagnosis and treatment success rate, post-operative complications, and patient cooperation.

5.3.1. Anamnesis

A thorough anamnesis on the first day was conducted 81.7% of the time, making this initial step important to lead the rest of the dental examination.

In fact, anamnesis originates from a very old method called the patient-centered interview that focuses on four principal dimensions stemming from patients' experiences, which are their thoughts about their health issues, how they feel about it, how it's impacting their daily life, and finally their expectations from the treatment plan. Consequently, anamnesis is the basis for communication skills with patients, which improves their satisfaction and compliance, thus evidently impacting health outcomes (Weston et al., 1989; Nestel & Betson, 1999).

5.3.2. Diagnosis and treatment success rate

Given high (57.6%) and average (42.4%) success rates, dentists reported favorable diagnosis success rate. Likewise, following reports of high (57.6%) and average (41.9%) success rates, treatment success rate was reported to be favorable among dentists.

Diagnosis and treatment make an inseparable set that is heavily influenced by a thorough assessment of signs and symptoms. Although there is a certain uncertainty accompanying the

process, using standard communication techniques to identify and interpret data collected from patients undeniably benefits diagnosis accuracy and treatment decisions by eliminating as many limitations as possible (Buse et al., 2018; Santhosh et al., 2019).

5.3.3. Post-operative complications

Post-operative complications were rare (96.9%). Thus, the rate of post-operative complications in dental treatments was relatively low.

In fact, a study showed that the most common post-operative symptoms were bleeding, discomfort, and pain. However, they usually manifest in rather long and difficult procedures, which makes the chance of them happening very rare (Cantekin et al., 2014). Communicating the possible occurrence of these complications and providing advice will prepare patients mentally to properly manage the situation.

5.3.4. Patient cooperation

Dental hygiene instructions were respected by patients 73.8% of the time. Faulty dental hygiene was due to lack of motivation (48.9%), unwillingness (27.1%), and ignorance (24%).

Adherence to dental treatment (80.8%) was mainly respected. Reasons for patients' non-adherence were ignorance (55.3%), unwillingness (40.5%), and lack of trust (4.2%).

Patient cooperation was compromised by ignorance (54.1%), prejudice against dentists (22.3%), caution (10.5%), mistrust (7.4%), and misunderstanding (5.7%).

Some of our findings align with those of Teo et al. (2018) who identified lack of understanding of medications contributes to medication non-adherence, which in turn compromises disease control. Likewise, Nowak et al. (2018) point out the notion of shared

responsibility, where patients' willingness to cooperate comes from their awareness of the importance of oral health, which creates a sense of true partnership between dentists and patients.

Finally, patients' negative behaviors and attitudes can be changed by dentists through the use of motivational interviewing techniques all while considering many factors regarding patients such as social acceptability. This way, non-compliance will be put to rest and successful follow-ups will be established onwards (Smith, 2019).

5.4. Patient satisfaction and safety

Elements that impact patient satisfaction and safety are communication practices, medical checkups, communication with patients, and patient complaints.

5.4.1. Communication practices

Means of communication

Means of communication between dentists and their patients vary. Face-to-face communication (93%) came first, followed by phone calls and/or texts (63.3%), then social media (18.3%) and emails (8.3%) ranked third and fourth respectively. Finally, three participants (1.3%) stated not communicating with their patients at all.

Communication is undoubtedly essential in the dentist-patient relationship. Our findings regarding face-to-face communication and phone calls being the leading tools of communication in a clinical setting are confirmed by Vaona et al. (2017) who also emphasize the importance of telephone consultation skills in order to encourage remote medical consultations.

Another study focused on the role of face-to-face communication in building rapport, making patients comfortable, and facilitating their participation in the consultation by adjusting their communication style to patients' needs (Nowak et al., 2018).

In contrast with our low findings regarding social media, Parmar et al. (2018) stated that more than 55% of dentists had social media platforms where patient interaction and engagement were ensured.

Communication competencies

The top three communication competencies practiced were active listening (83.8%), respect (58.1%), and clarity (56.3%). Confidence placed fourth (52.8%), followed by empathy (34.5%), friendliness (25.8%), open-mindedness (24.5%), responsiveness with (23.1%), and diplomacy with (21.4%). One participant (0.4%) stated not practicing any of the communication skills aforementioned.

Many studies reflected our results in terms of communication competencies and encourage standard communication techniques for better health outcomes (Buse et al., 2018). This calls for a patient-centered approach where patients have an active role in the communication process, thus developing a solid dentist-patient relationship (Nowak et al., 2018).

For instance, Nardelli et al. (2018) stated that practicing empathy in the doctor-patient relationship has proved its psycho-physiological effect in terms of well-being. Another study by Watanbe et al. (2018) linked empathy to three factors that result in patient satisfaction, which are perspective-taking, compassionate care, and standing in the patient's shoes.

Open-mindedness was also confirmed by Smith (2019) who insisted on the importance of learning to communicate in a culturally competent manner while taking into consideration one's own norms, values and views. All of this will help build a good dentist-patient relationship and deliver proper dental care.

Appointment reminders

As for the use of appointment reminders, dentists' first choice was phone calls (62.4%), while appointment cards came in a strong second (55.9%). Texting (17%) and emails (0.9%) were the least picked options. Meanwhile, 14.8% of the participating dentists didn't remind their patients of their appointments.

Appointment reminders are one way for dentists to look after their patients' dental health by making sure they don't miss any of their scheduled appointments.

As opposed to our low results in terms of using texting to remind patients of their appointments, both Foley & O'Neill (2009) and Perry (2011) agreed that the constant use of SMS text messages not only facilitates communication with patients by improving their attendance rate, but it also subsequently enhances their dental health by having them commit to their regular appointments.

Another innovative way to serve as appointment reminder is the creation of a mobile app in the form of a dental calendar according to Lin et al. (2014). As a matter of fact, appointment management became much more practical and convenient for dentists and patients equally and strengthened the dentist-patient relationship.

5.4.2. Medical checkups

As for medical equipment, blood pressure monitors (42.8%) and thermometers (32.8%) were the most owned medical devices. Next were blood glucose meters (18.3%) and stethoscopes (10.9%). On the other hand, 47.6% of the participating dentists didn't own any of these medical devices. Blood tests were mostly prescribed by dentists whenever deemed necessary (88.2%). Aside from one dentist (0.4%) who never checks up on their patients' general health, 70.3% lead regular general health checkups while 29.3% do it sometimes.

Diabetes and hypertension are two of the most predominant chronic illnesses, and keeping an eye on them in a dental setting is a necessary mean of clinical communication. Soares & Morse (2004) confirmed our findings regarding the importance and practice of blood pressure screening and monitoring among dentists in the dental office. Likewise, Maboudi et al. (2019) encouraged early diagnosis and prevention of prediabetic condition in order to reduce the severity of periodontitis and avoid irreversible periodontal damage.

Furthermore, a study by Greenberg et al (2012) found that screening for heart disease, high blood pressure, diabetes, human immunodeficiency virus infection, and hepatitis infection was very welcome by patients as it would improve their opinion of their dentists' professionalism, knowledge, competence, and compassion.

As for drugs, Hersh & Moore (2015) insisted on the importance of recognizing and preventing serious drug interactions in order to ensure safe and adequate treatments for patients. Clinicians should avoid the following drug interactions due to their impact on dental practice: Nonsteroidal anti-inflammatory drugs (NSAIDs) which lead to lithium toxicity by inhibiting the renal excretion of lithium; Metronidazole and fluconazole which inhibit the metabolism of warfarin, thus increasing patients' international normalized ratios (INRs) and potentially causing fatal bleeding; and finally Propranolol and other nonselective beta-adrenergic blocking agents inhibiting the vasodilator effect of epinephrine in dental local anesthetic solutions, which leads to hypertensive reactions and a concomitant reflex bradycardia.

5.4.3. Communication with patients

Communication problems

Lack of instructions (35.4%) was reported to be the main reason for miscommunication between dentists and patients, followed by ignorance (27.5%), prejudice (21.8%), and disobedience (15.3%).

Many authors agreed with our findings. Teo et al (2018) associated lack of understanding of diagnosis and treatment to bad communication that results in poorer health outcomes, whereas Nowak et al. (2018) confirmed that social stereotypes regarding dentists indeed impeded communication with patients.

Ignorance was also highlighted by Fico & Lagoe (2018) and Smith (2019) who attributed it to insufficient or limited health literacy, which patients from low socioeconomic status and highly-educated patients suffer from evenly. It is dentists' duties to communicate with patients using a suitable language to convey medical explanation in an understandable and clear manner so as to earn trust and ensure patient satisfaction.

Interaction with patients' relatives

Most dentists interact (86%) with their patients' relatives. The main reason behind this interaction was when patients are senile, children, or disabled (77.9%). Another reason would be in case the relatives were also the dentist's patients (18.3%). Otherwise, the interaction is regular (17.3%) for some dentists.

Our findings regarding interactions with relatives when patients are senile, children, or disabled were consolidated by Smith & Vermeir (2019) who encouraged establishing a special patient-centered approach by communicating with patients' carers or volunteers during a dental visit.

5.4.4. Patient complaints

In terms of patient complaints, a striking majority of dentists (91.3%) always listened to them. Patient complaints were constantly acknowledged only 27.5% of the time, whereas their validity was assessed before consideration in 72.5% of the time. The most common patient complaints were pain (45%), discomfort (41.9%), esthetic satisfaction (7.9%), and oral functions (5.2%).

Similarly to our findings, Nowak et al. (2018) encouraged listening to patients and allowing them to lead the conversation and express their thoughts in order to get hold of their needs, expectations and personality more efficiently.

In terms of patient complaints, our findings supported those of Thomas et al (2018) who stated that dentists had the highest rate of complaints with most of them (59%) being related to treatments and procedures.

5.5. Team satisfaction

Team satisfaction depends on an effective communication with staff members and healthcare professionals.

5.5.1. Communication with staff members

Communication means

Face-to-face communication (88.6%) was dentists' preferred mean of communication with their staff. Next was phone calls (9.6%) and written notes (0.9%). None of the participants used emails to communicate, while two dentists (0.9%) reported not communicating with their staff at all.

Communication styles differ between dentists and their staff. Reflecting our findings, the results of Leith et al (2000) clearly highlighted the uselessness of written notes as a standard mean of communication and pinpointed the adequacy of phone conversations between dentists and laboratory technicians. As for face-to-face communication, Gorter & Freeman (2005) and Khader & Abu-Sharbain (2009) both stated that communication style and effectiveness depends on gender, as male dentists tend to be more authoritarian with their staff – namely assistants – as opposed to female dentists who are friendlier in their approach.

Staff training

Undisciplined patients (78.2%) were reported to be the main staff complaint. Occupational health issues (17%) came second, followed by lack of communication (14.4%) and difficult co-workers (9.6%). Most dentists (81.7%) train their staff to properly manage patient problems, needs, and demands.

Our finding regarding undisciplined patients was confirmed by Gorter & Freeman (2005) who reported the biggest reason for stressfulness in the dental office being due to constantly dealing with patients who are incompliant or problematic.

In order to keep these problems at bay, formal trainings and workshops should be scheduled in order to teach and enhance communication skills on a regular basis like it used to be part of the dental curriculum. Focusing on communicational issues, professional interaction, and positive communicative attitude is vital to the dentist-patient relationship in terms of patient satisfaction and healthcare outcomes. (Nestel & Betson, 1999, Woelber et al., 2012, Palamar et al., 2019).

Communication problems

Communication problems between dentists and their staff included misunderstandings (36.2%), negligence (35.8%), indifference (24.5%), and rebellion (3.5%).

Conflict is inevitable in dental practice as well as any other practice, and communication is key to resolve this issue at once. Avoidance will only make things worse and create a toxic atmosphere in the office, which would subsequently impact the practice as a whole. Confronting staff members while using communication competencies as conflict resolution techniques is one step closer to restore order in the workplace and shift focus back to patient care (Levin, 2014).

5.5.2. Communication with other healthcare professionals

Communication means

Communication means that dentists use with other healthcare professionals were correspondence (53.7%), phone calls (33.2%), and emails (2.2%). However, four participants reported not communicating at all (1.7%) with other healthcare professionals.

In contrast with our finding regarding correspondence, Bibona et al (2015) found that orthodontists shifted their communication method from exchanging letters with dentists to two-way forms of communication such as phone calls.

Communication problems

50.7% of the dentists communicated regularly with other healthcare professionals regarding the health of their chronically-ill patients, while 48.9% did it occasionally. Meanwhile, one participant (0.4%) never communicated with other healthcare professionals regarding their patients. Miscommunication with other healthcare professionals was attributed to lack of written reports (52%), misinterpretation of information (24.9%), lack of cooperation (15.7%), and negligence (7.4%).

Communication with other healthcare professionals is essential for dentists because it helps them ensure optimal patient-centered care. Bibona et al (2015) and Artis et al (2017) confirmed our findings regarding communication problems by pinpointing inaccurate transfer of patient laboratory data, misrepresentation of said information, and negligence regarding diagnostic reports.

5.6. Malpractice risk

Malpractice risk can become an issue when dental records, medical history, and deontology (ethical duties) are compromised.

5.6.1. Dental records

Creating dental records was systematic for every patient that comes in for a consultation according to nearly all dentists (95%). Dental records were mainly archived in physical form (53.5%) as opposed to digital form (10.2%). Both archiving forms were used 36.3% of the time.

Dental records are crucial for a proper patient-centered care. Artis et al., 2017 agreed with our statement by pointing out health records were critical for proper clinical decision making. However, their study showed that only 78% of electronic health record laboratory data was available.

5.6.2. Medical history

Reviewing dental records (63.3%) was the most used method to keep patients' medical history up to date, whereas maintaining regular follow-ups (47.2%) was a second method. The other two less popular methods were correspondence with healthcare professionals (39.4%) and blood test prescription (16.7%).

Our findings and those of Kovalesky et al (2019) mutually emphasized the importance of having a complete and accurate medical history by filling missing health information such as medical conditions, medications, allergies, all while monitoring patients' general health. They also encouraged contacting patients' physicians for a history form to review it for accuracy.

5.6.3. Deontology

Diagnosis and treatment process

59.8% of dentists described the diagnosis and treatment process to patients in detail, while 19.2% mainly summarized the clinical case to patients. On the other hand, 17% only answered patients' questions and 3.5% sticked to prescription explanation. One dentist (0.4%) did none of the aforementioned.

Dentists' approach in presenting a detailed diagnosis and treatment process is a medico-legal obligation. In this light, our findings were favorable and joined the research of Nowak et al (2018) and Teo et al (2018) that linked patients' comprehension of diagnosis to better adherence to self-care practices and improved clinical outcomes, which should be dentists' main goals. In contrast, Buse et al. (2018) showed that only 37.1% dentists implement a detailed diagnosis and treatment process.

First aid kits

First aid kits only existed in 39% of dental offices/clinics, which is worrisome. In case of a medical emergency, patients might become unresponsive, though the only mean of communication dentists would have with their patients would be their medical history and their first aid kit to save the day.

Chapman (2003) introduced the concept of having a basic medical emergency kit suitable for a dentist which contains the most essential equipment for the sake of common sense and safety. Components of the first aid kit that were cited were oxygen, adrenaline, aspirin, salbutamol, glucagon, and oral glucose. Other equipment includes oxygen therapy facemask, a pocket mask, a set of oral (Guedel) airways, and alcohol wipes. Naturally, competency in basic life support skills is unquestionable in order to put the medical kit to proper use.

According to Morse & Murthi (2004), medical emergencies in dental clinics – albeit uncommon – include fainting, postural hypotension, hypoglycemia, seizures, and asthma. Further training to adequately manage these medical emergencies is of utmost urgency to dentists, thus ensuring a holistic approach regarding patient-centered care.

5.7. Conclusion

In this chapter, we discussed the findings of our quantitative research by comparing and contrasting the similarities and differences between our findings and those of literature and past studies. This discussion helped us achieve our objectives, which are: to find out how effective communication is in the dental healthcare sector in Morocco, to identify the common communication skills practiced by Moroccan dentists, and to describe the impact of a good evidence-based communication on health outcomes in dentistry. Subsequently, our study confirms the hypothesis stating that evidence-based communication contributes to optimal healthcare delivery.

Chapter Six: Conclusion

6.1. Introduction

Good communication is based on an efficient exchange of information. When applied to healthcare, doctors are supposed to build accurate, thorough, and clear conversations in an honest and compassionate manner which would allow patients to successfully understand and accept what's being said to them, thus ultimately establishing a healthy physician-patient relationship based on trust and reliance (Vermeir et al., 2015; Merlino, 2017). All of this is part of a multifaceted process called patient-centered care (Picker Institute, n.d. ; Cheraghi et al., 2017; Parse, 2019).

One way to achieve patient-centered care is by implementing evidence-based communication, which is a competency-based approach that implements communication skills in an efficient manner to deliver safe, effective patient care (Henry et al., 2013).

The aim of this study was to define the relationship between evidence-based communication and patient-centered care in the dental healthcare sector in Morocco.

6.2. Summary of findings

The hypothesis stating that evidence-based communication contributes to optimal healthcare delivery was confirmed by literature and past studies, where some of the recurrent themes defining the relationship between evidence-based communication and patient-centered care were diagnostic accuracy, adherence to treatment, patient satisfaction and safety, team satisfaction, and malpractice risk (Walshe & Rundall, 2001; Rodin et al., 2009; Institute for Healthcare Communication, 2011; Merlino, 2017; Omura & al., 2018; Tehranineshat et al., 2019; Udvardi, 2019).

6.3. Limitations of the study

Much like evidence-based management, the concept of evidence-based communication as a whole remains a novelty, which explains its scarcity in terms of scientific publications for healthcare managers (Jaana et al., 2014).

Other limitations that we encountered in this study include the sample size which was relatively small considering the number of dentists in Morocco as well as disproportions in gender and dental healthcare sector.

6.4. Future research

Conducting new studies on bigger samples observing the impact of evidence-based communication on healthcare outcomes from the perspective of gender and dental healthcare sector would perhaps give us a better insight into the relationship binding communication competencies and healthcare delivery.

Also, conducting a deeper statistic analysis in order to underline the correlation between communication competencies and healthcare-related factors would give us much more satisfactory and pertinent results that we can in turn present to dentists in order to help them better their daily practice and ensure optimal patient-centered care by adopting evidence-based communication.

Finally, using some of the evidence-based communication models that were mentioned in our literature review to lead future studies would help us delve more into the impact of this concept from a healthcare management point of view.

6.5. Recommendations

This preliminary study has shed a light on the importance of acquiring communication competencies prior to graduating dental school in order to launch a holistic practice from the start. Thus, our recommendations for current and future dentists for a better healthcare management are:

- To always put communication first and foremost, starting with patients but without omitting the importance of daily interactions with staff members and other healthcare professionals as well for a healthy team satisfaction.
- To utilize communication skills to a maximum to ensure a thorough anamnesis in order to give accurate diagnosis from which a proper treatment plan can be established.
- To always put patient satisfaction and safety first because ignoring it might have negative healthcare outcomes.
- To avoid malpractice risk by staying up to date with patients' general health, thus fulfilling their medical and ethical duties as doctors.

6.6. Conclusion

Evidence-based communication is a concept that takes healthcare delivery to a whole new level. While our hypothesis regarding the potential relationship between evidence-based communication and patient-centered care was confirmed, more studies should be led in order to highlight how deeply rooted this relationship is and what means are necessary to explore it to the fullest.

Bibliography

Agarwal, P., Agarwal, N., & Friedlander, R. M. (2019). Solving health care's "iron triangle": Neurosurgical perspective. World Neurosurgery, 123, 244–245. doi:10.1016/j.wneu.2018.12.059

Ajjawi, R., & Higgs, J. (2011). Core components of communication of clinical reasoning: A qualitative study with experienced Australian physiotherapists. Advances in Health Sciences Education, 17(1), 107–119. doi:10.1007/s10459-011-9302-7

Alami, H., Gagnon, M. P., Wootton, R., Fortin, J. P., & Zanaboni, P. (2017). Exploring factors associated with the uneven utilization of telemedicine in Norway: A mixed methods study. Medical Informatics and Decision Making, 17(180). doi:100.1186/s12911-017-0576-4

Algahtani, A. (2014). Are leadership and management different? A review. Journal of Management Policies and Practices, 2(3)71-82. doi: 10.15640/jmpp.v2n3a4

Al-Rawi, N.H., Yousef, H., Khamis, M., Belkadi, O., Ahmed, S., Ali, S. (2018). Vertebral malalignment among male dentists with work-related musculoskeletal pain in the United Arab Emirates.The Journal of Contemprary Dental Practice, 19(7), 773-777.

Artis, K. A., Dyer, E., Mohan, V., & Gold, J. A. (2017). Accuracy of laboratory data communication on ICU daily rounds using an electronic health record. Critical Care Medicine, 45(2), 179–186. doi:10.1097/ccm.0000000000002060

Austin, A., & Wetle, V. (2017). United States health care system: Combining business, health, and delivery (3rd ed.). Pearson Publishing.

Bernstein, J. (2018). Not the last word. Clinical Orthopaedics and Related Research, 476(8), 1569–1572. doi:10.1097/corr.0000000000000382

Bibona, K., Shroff, B., Best, A. M., & Lindauer, S. J. (2015). Communication practices and preferences between orthodontists and general dentists. The Angle Orthodontist, 85(6), 1042–1050. doi:10.2319/111714-826.1

Boggiano, V. L., Wu, Y., Bruce, J. S., Merrell S. B., Schillinger, E. (2017). Patient-centered care challenges and surprises: Through the clerkship students' eyes. Family Medicine, 49(1), 57-61.

Bortun, D., & Matei, C. S. (2017). Aspects of communication in medical life. Doctor-patient communication: Differentiation and customization. Journal of Medicine and Life, 10(1), 60-65.

Brady, A.-M., Byrne, G., Quirke, M. B., Lynch, A., Ennis, S., Bhangu, J., & Prendergast, M. (2017). Barriers to effective, safe communication and workflow between nurses and non-consultant hospital doctors during out-of-hours. International Journal for Quality in Health Care, 29(7), 929–934. doi:10.1093/intqhc/mzx133

Bucăţa, G. & Rizescu, A. M. (2017). The role of communication in enhancing work effectiveness of an organization. Land Forced Academy Review, 22(1), 49-57. doi:10.1515/raft-2017-0008

Bumb, M., Keefe, J., Miller, L., & Overcash, J. (2017). Breaking bad news: An evidence-based review of communication models for oncology nurses. Clinical Journal of Oncology Nursing, 21(5), 573–580. doi:10.1188/17.cjon.573-580

Burns, L. R., & Pauly, M. V. (2018). Transformation of the health care industry: Curb your enthusiasm? The Milbank Quarterly, 96(1), 57-109.

Buse, D. C., Gillard, P., Arctander, K., Kuang, A. W., & Lipton, R. B. (2018). Assessing physician-patient dialogues about chronic migraine during routine office visits. Headache: The Journal of Head and Face Pain. doi:10.1111/head.13314

Cantekin, K., Yildirim, M. D., Delikan, E., & Cetin, S. (2014). Postoperative discomfort of dental rehabilitation under general anesthesia. Pakistan Journal of Medical Sciences, 30(4), 784-788.

Chapman, P. (2003). An overview of drugs and ancillary equipment for the dentist's emergency kit. Australian Dental Journal, 48(2), 130–133. doi:10.1111/j.1834-7819.2003.tb00022.x

Chen, Z., Min, J., Bian, J., Wang, M., Zhou, L., & Prosperi, M. (2018). Risk of health morbidity for the uninsured: 10-year evidence from a large hospital center in Boston, Massachusetts. International Journal for Quality in Health Care. doi:10.1093/intqhc/mzy175

Cheraghi, M. A., Esmaeili, M., & Salsali, M. (2017). Seeking humanizing care in patient-centered care process. Holistic Nursing Practice, 31(6), 359–368. doi:10.1097/hnp.0000000000000233

Chichirez, C. M., & Purcărea, V. L. (2018). Interpersonal communication in healthcare. Journal of Medicine and Life, 11(2), 119-122.

Chou, C. (2018). Evidence-based approaches to patient-provider communication. Retrieved from: https://catalyst.nejm.org/evidence-based-patient-provider-communication/

Cleary-Holdforth, J. (2017). Evidence-based practice: An ethical perspective. Worldviews on Evidence-Based Nursing, 14(6), 429–431. doi:10.1111/wvn.12263

Combi, C., Pozzani, G., & Pozzi, G. (2016). Telemedicine for developing countries: A survey and some design issues. Applied Clinic Informatics, 7, 1025–1050. doi:10.3389/fcvm.2019.00076

Communication. (n.d.). Retrieved from: https://www.oxfordlearnersdictionaries.com/definition/english/communication?q=communication

Constand, M. K., MacDermid, J. C., Bello-Haas, V. D., & Law, M. (2014). Scoping review of patient-centered care approaches in healthcare. BMC Health Services Research, 14(271). http://www.biomedcentral.com/1472-6963/14/271

Could, J. R. (1969). Barriers to effective communication. Journal of Business Communication, 6(2), 53–58. doi:10.1177/002194366900600207

Fan, T., & Elgourt, T. (2008). Pain management pharmacy service in a community hospital. American Journal of Health-System Pharmacy, 65(16), 1560–1565. doi:10.2146/ajhp070597

Fico, A. E., & Lagoe, C. (2017). Patients' perspectives of oral healthcare providers' communication: Considering the impact of message source and content. Health Communication, 33(8), 1035–1044. doi:10.1080/10410236.2017.1331188

Flodgren, G., Rachas, A., Farmer, A. J., Inzitari, M., & Shepperd, S. (2015). Interactive telemedicine: Effects on professional practice and health care outcomes. Cochrane Database of Systematic Reviews. doi:10.1002/14651858.cd002098.pub2

Foley, J., & O'Neill, M. (2009). Use of mobile telephone short message service (SMS) as a reminder: The effect on patient attendance. European Archives of Paediatric Dentistry, 10(1), 15–18. doi:10.1007/bf03262661

Gorter, R. C., & Freeman, R. (2005). Dentist-assistant communication style: Perceived gender differences in the Netherlands and Northern Ireland. Community Dentistry and Oral Epidemiology, 33(2), 131–140. doi:10.1111/j.1600-0528.2005.00217.x

Greenberg, B. L., Kantor, M. L., Jiang, S. S., & Glick, M. (2011). Patients' attitudes toward screening for medical conditions in a dental setting. Journal of Public Health Dentistry, 72(1), 28–35. doi:10.1111/j.1752-7325.2011.00280.x

Hemsley, B., Balandin, S., & Worrall, L. (2011). Nursing the patient with complex communication needs: Time as a barrier and a facilitator to successful communication in hospital. Journal of Advanced Nursing, 68(1), 116–126. doi:10.1111/j.1365-2648.2011.05722.x

Henry S. G., Eric S. Holmboe & Richard M. Frankel (2013). Evidence-based competencies for improving communication skills in graduate medical education: A review with suggestions for implementation, Medical Teacher, 35:5, 395-403, doi: 10.3109/0142159X.2013.769677

Hersh, E.V., Moore, P.A. (2015). Three serious drug interactions that every dentist should know about. Compendium of Continuing Education in Dentistry, 36(6), 408-416.

Hoffer, E. P. (2019). The American health care system is broken. Part 7: How can we fix it? The American Journal of Medicine, 132(12): 1381-1385. doi:10.1016/j.amjmed.2019.10.003

Horgan, D., Borisch, B., Richer, E., Bernini, C., Kalra, D., Lawler, M., ... Jonsson, B. (2020). Propelling health care into the twenties, Biomedicine Hub, 0(0).

Hoxha, I., Braha, M., Syrogiannouli, L., Goodman, D. C., & Jüni, P. (2019). Caesarean section in uninsured women in the USA: Systematic review and metaanalysis. BMJ Open, 9(3). doi: 10.1136/bmjopen-2018-025356

Institute for Healthcare Communication. (2011). Impact of communication in healthcare. Retrieved from: https://healthcarecomm.org/about-us/impact-of-communication-in-healthcare/

Jaana, M., Vartak, S., & Ward, M. M. (2014). Evidence-based health care management. Evaluation & the Health Professions, 37(3), 314–334. doi:10.1177/0163278713511325

Jesus, T. S., & Silva, I. L. (2015). Toward an evidence-based patient-provider communication in rehabilitation: Linking communication elements to better rehabilitation outcomes. Clinical Rehabilitation, 30(4), 315–328. doi:10.1177/0269215515585133

Kaehler, B., & Grundei, J. (2019). HR Governance. Springer Briefs in Business. doi:10.1007/978-3-319-94526-2

Khader, Y., & Abu-Sharbain, G. (2009). Dentist-assistant interaction styles in Jordan. International Journal of Dental Hygiene, 7(2), 131–135. doi:10.1111/j.1601-5037.2008.00337.x

Kovalesky, M.B., Unkel, J.H., Reinhartz, J., Reinhartz, D. (2019). Discrepancies between dental parent-derived health histories and medical electronic health records. Pediatric Dentistry, 41(5), 371-375.

Kristjansdottir, O. B., Børøsund, E., Westeng, M., Ruland, C., Stenberg, U., Zangi, H. A., Stange, K., & Mirkovic, J. (2020). Mobile app to help people with chronic illness reflect on their strengths: Formative evaluation and usability testing. JMIR Formative Research, 4(3). doi:10.2196/16831

Lasselin, J., Lekander, M., Paues-Göranson, S., Olsson, M. J., & Axelsson, J. (2018). Communication of health in experimentally sick men and women: A pilot study. Psychoneuroendocrinology, 87, 188–195. doi:10.1016/j.psyneuen.2017.10.024

Lehr, H.-A., & Bosman, F. T. (2015). Communication skills in diagnostic pathology. Virchows Archiv, 468(1), 61–67. doi:10.1007/s00428-015-1848-y

Leith, R., Lowry, L., O'Sullivan, M. (2000). Communication between dentists and laboratory technicians. Journal of the Irish Dental Association, 46(1), 5-10.

Levin, R. P. (2014). When the dental team experiences conflict. The Journal of the American Dental Association, 145(7), 766–767. doi:10.14219/jada.2014.40

Lin, C.-Y., Peng, K.-L., Chen, J., Tsai, J.-Y., Tseng, Y.-C., Yang, J.-R., & Chen, M.-H. (2014). Improvements in dental care using a new mobile app with cloud services. Journal of the Formosan Medical Association, 113(10), 742–749. doi:10.1016/j.jfma.2014.02.009

Lunenburg, F. C. (2010). Communication: The process, barriers, and improving effectiveness. Schooling, 1.

Maboudi, A., Akha, O., Heidari, M., Mohammadpour, R. A., Gheblenama, P., & Shiva, A. (2019). Relation between periodontitis and prediabetic condition. Journal of Dentistry Shiraz University of Medical Sciences, 20(2), 83-89. doi: 10.30476/DENTJODS.2019.44928

Macarevich A, Pilotto LM, Hilgert JB, Celeste RK. User satisfaction with public and private dental services for different age groups in Brazil. Cad Saude Publica. 2018;34(2):e00110716. Published 2018 Feb 19. doi:10.1590/0102-311X00110716

Mackey, A., & Bassendowski, S. (2017). The History of evidence-based practice in nursing education and practice. Journal of Professional Nursing, 33(1), 51–55. doi:10.1016/j.profnurs.2016.05.009

Maex, E., & De Valck, C. (2006). Recent results in cancer research: Key elements of communication in cancer care. Springer-Verlag Berlin Heidelberg.

Mahajan, R. (2015). The key role of communication skills in the life of professionals. IOSR Journal of Humanities and Social Science, 20(12), 36-39.

Manyazewal, T. (2017). Using the World Health Organization health system building blocks through survey of healthcare professionals to determine the performance of public healthcare facilities. Archives of Public Health, 75(1). doi:10.1186/s13690-017-0221-9

McCabe, C. (2004). Nurse–patient communication: An exploration of patients' experiences. Journal of Clinical Nursing, 13, 41-49.

Merlino, J. (2017). Communication: A Critical healthcare competency: Patient safety & quality healthcare. Retrieved from: https://www.psqh.com/analysis/communication-critical-healthcare-competency/

Meuter, R. F. I., Gallois, C., Segalowitz, N. S., Ryder, A. G., & Hocking, J. (2015). Overcoming language barriers in healthcare: A protocol for investigating safe and effective communication when patients or clinicians use a second language. BMC Health Services Research, 15(1). doi:10.1186/s12913-015-1024-8

Mittal, S. (2018). Barriers to communication. International Journal of Advanced Research and Development, 3(1), 243-245.

Morsen, Z., & Murthi, V.K. (2004). Medical emergencies in dental practice in the Fiji Islands. Pacific Health Dialog, 11(1), 55-58.

Nardelli, M., Greco, A., Danzi, O. P., Perlini, C., Tedeschi, F., Scilingo, E. P., Del Piccolo, L., & Valenza, G. (2018). Cardiovascular assessment of supportive doctor-patient communication using multi-scale and multi-lag analysis of heartbeat dynamics. Medical & Biological Engineering & Computing. doi:10.1007/s11517-018-1869-1

Nestel, D., & Betson, C. (1999). Communication skills: An evaluation of a communication skills workshop for dentists: cultural and clinical relevance of the patient-centred interview. British Dental Journal, 187(7), 385–388. doi:10.1038/sj.bdj.4800286

Noland, C. M., & Carmack, H. J. (2014). "You Never Forget Your First Mistake": Nursing Socialization, Memorable Messages, and Communication About Medical Errors. Health Communication, 30(12), 1234–1244. doi:10.1080/10410236.2014.930397

Nowak, M. J., Buchanan, H., & Asimakopoulou, K. (2018). "You have to treat the person, not the mouth only": UK dentists' perceptions of communication in patient consultations. Psychology, Health & Medicine, 23(6), 752–761. doi:10.1080/13548506.2018.1457167

O'Daniel, M. and Rosenstein, A. (2008). Patient safety and quality: An evidence-based handbook for nurses: Vol. 2. pp.271-284.

O'Halloran, R., Worrall, L., & Hickson, L. (2011). Environmental factors that influence communication between patients and their healthcare providers in acute hospital stroke units: An observational study. International Journal of Language & Communication Disorders, 46(1), 30-47. doi:10.3109/13682821003660380

Oleribe, O. E., Momoh, J., Uzochukwu, B. S., Mbofana, F., Adebiyi, A., Barbera, T., … Taylor Robinson, S. D. (2019). Identifying key challenges facing healthcare systems in africa and potential solutions. International Journal of General Medicine, Volume 12, 395–403. doi:10.2147/ijgm.s223882

Omura, M., Stone, T., Maguire, J. and Levett-Jones, T. (2018). Exploring Japanese nurses' perceptions of the relevance and use of assertive communication in healthcare: A qualitative study informed by the Theory of Planned Behaviour. Nurse Education Today, 67, pp.100-107.

Ortiz, M. R. (2018). Patient-centered care: Nursing knowledge and policy. Nursing Science Quarterly, 31(3), 291–295. doi:10.1177/0894318418774906

Palamar, B. I., Proshkin, V. V., Volkova, N. P., Rezvan, O. O., & Tkachenko, L. P. (2019). Preparation content updating of future dentists to professional interaction. Wiad Lek, 72, 1809-1813.

Parmar, N., Dong, L. & Eisingerich, A. B. (2018). Connecting with your dentist on Facebook: Patients' and dentists' attitude. Towards Social Media Usage in Dentistry. Journal of Medical Internet Research, 20(6). DOI: 10.2196/10109

Parse R. R. (2019). Nurses and person-centered care. Nursing Science Quarterly, 32(4), 265. 10.1177/0894318419864335

Perry, J. G. W. (2011). A preliminary investigation into the effect of the use of the Short Message Service (SMS) on patient attendance at an NHS Dental Access Centre in Scotland. Primary Dental Care, 18(4), 145-149.doi: 10.1308/135576111797512810

Poitras, M.-E., Maltais, M.-E., Bestard-Denommé, L., Stewart, M., & Fortin, M. (2018). What are the effective elements in patient-centered and multimorbidity care? A scoping review. BMC Health Services Research, 18(1). doi:10.1186/s12913-018-3213-8

Powers, W. J., Rabinstein, A. A., Ackerson, T., Adeoye, O. M., Bambakidis, N. C., … Becker, K. (2019). Guidelines for the early management of patients with acute ischemic stroke: 2019 update to the 2018 guidelines for the early management of acute ischemic stroke: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. Stroke. doi:10.1161/str.0000000000000211

Prozesky, D. R. (2000). Communication and effective teaching. Community Eye Health, 13(35), 44–45.

Rajeh, M., Nicolau, B., Qutob, A., Pluye, P., & Esfandiari, S. (2019). A survey of the barriers affecting the career practice and promotions of female dentists in Saudi Arabia. JDR Clinical & Translational Research, 238008441881545. doi:10.1177/2380084418815458

Rani, K. U. (2016). Communication barriers. Journal of English Language and Literature, 3(2), 74-76.

Rodin, G., Zimmermann, C., Mayer, C., Howell, D., Katz, M., Sussman, J., Mackay, J. and Brouwers, M. (2009). Clinician-patient communication: Evidence-based recommendations to guide practice in cancer. Current Oncology, 16(6), pp.42-49.

Santhosh, L., Chou, C. L., & Connor, D. M. (2019). Diagnostic uncertainty: From education to communication. Diagnosis, 0(0). doi:10.1515/dx-2018-0088

Schraeder, M., Jordan, M. H., & Portis, R. (2014). The functions of management as mechanisms for fostering interpersonal trust. Advances in Business Research, 5, 50-62.

Seo, V., Baggett, T. P., Thorndike, A. N., Hull, P., Hsu, J., Newhouse, J. P., & Fung, V. (2019). Access to care among Medicaid and uninsured patients in community health centers after the Affordable Care Act. BMC Health Services Research, 19(1). doi:10.1186/s12913-019-4124-z

Sinsky, C. A., & Bodenheimer, T. (2019). Powering-up primary care teams: Advanced team care with in-room support. Annals of Family Medicine, 17(4), 367-371. doi:10.1370/afm.2422

Smith, A.J.E. (2019). Serie: Communicatie in de tandartspraktijk. Motiveren tot gedragsverandering [Series: Communication in the dental practice. Motivating change in behaviour]. Ned Tijdschr Tandheelkd, 126(3),133-139. doi:10.5177/ntvt.2019.03.18239

Smith, A.J.E. (2019). Serie: Communicatie in de tandartspraktijk. Cultureel competent communiceren [Series: Communication in the dental practice. Communicating in a culturally competent manner]. Ned Tijdschr Tandheelkd, 126(7-8), 377-383. doi:10.5177/ntvt.2019.07/08.19031

Smith, A.J.E. (2019). Serie: Communicatie in de tandartspraktijk. Laaggeletterdheid en beperkte gezondheidsvaardigheden [Series: Communication in the dental practice. Low levels of literacy and limited health literacy]. Ned Tijdschr Tandheelkd. 2019, 126(9), 443-448. doi:10.5177/ntvt.2019.09.19038

Smith, A.J.E., & Vermeir P. (2019). Serie: Communicatie in de tandartspraktijk. Communiceren met de oudere patiënt [Series: Communication in the dental practice. Communicating with older patients]. Ned Tijdschr Tandheelkd,126(12),665-671. doi:10.5177/ntvt.2019.12.19058

Soares, L.F., & Morse, Z. (2004). Blood pressure monitoring amongst Fijian general dental practitioners. Pacific Health Dialog, 11(1), 44-46.

Starr, S. R., Agrwal, N., Bryan, M. J., Buhrman, Y., Gilbert, J., Huber, J. M., … Johnson, C. D. (2017). Science of health care delivery. Mayo Clinic Proceedings: Innovations, Quality & Outcomes, 1(2), 117–129. doi:10.1016/j.mayocpiqo.2017.07.001

Stannard, D. (2019). A practical definition of evidence-based practice for nursing. Journal of PeriAnesthesia Nursing, 34(5), 1080–1084. doi:10.1016/j.jopan.2019.07.002

Stott, D. (2011). Communication: Why is this such an emotive subject? Journal of Perioperative Practice, 21(7), 219.

Tehranineshat, B., Rakhshan, M., Torabizadeh, C. and Fararouei, M. (2019). Compassionate care in healthcare systems: A systematic review. Journal of the National Medical Association.

Teo, K. G., Tacey, M., & Holbeach, E. (2018). Understanding of diagnosis and medications among non-English-speaking older patients. Australasian Journal on Ageing, 37(2), E49–E54. doi:10.1111/ajag.12503

The Age of Personalized Medicine (n.d.). Retrieved from: http://www.personalizedmedicinecoalition.org/Userfiles/PMC-Corporate/file/pmc_age_of_pmc_factsheet.pdf

The American Geriatrics Society (2015). Person-centered care: A definition and essential elements. Journal of the American Geriatrics Society, 64(1), 15–18. doi:10.1111/jgs.13866

The principles of quality person centred care provision. (n.d.). Retrieved from: https://www.picker.org/news/principles-quality-person-centred-care-provision-always-depending-jurisdiction-just-adopted-advanced-different-ways/

Thomas, L., Tibble, H., Too, L., Hopcraft, M., & Bismark, M. (2018). Complaints about dental practitioners: An analysis of 6 years of complaints about dentists, dental prosthetists, oral health therapists, dental therapists and dental hygienists in Australia. Australian Dental Journal, 63(3), 285–293. doi:10.1111/adj.12625

Udvardi, A. (2019). The role of linguistics in improving the evidence base of healthcare communication. Patient Education and Counseling, 102(2), 388-393.

Van Ruler, B. (2018). Communication theory: An underrated pillar on which strategic communication rests. International Journal of Strategic Communication, 12(4), 367-381. doi: 10.1080/1553118X.2018.1452240.

Vaona, A., Pappas, Y., Grewal, R. S., Ajaz, M., Majeed, A., & Car, J. (2017). Training interventions for improving telephone consultation skills in clinicians. Cochrane Database of Systematic Reviews. doi:10.1002/14651858.cd010034.pub2

Velentzas, J., & Broni, G. (2014). Communication cycle: Definition, process, models and examples. Recent Advances in Financial Planning and Product Development, 117-131.

Vermeir, P., Vandijck, D., Degroote, S., Peleman, R., Verhaeghe, R., Mortier, E., Hallaert, G., Van Daele, S., Buylaert, W. and Vogelaers, D. (2015). Communication in healthcare: A narrative review of the literature and practical recommendations. International Journal of Clinical Practice, 69(11), pp.1257-1267.

Vorobeychik, Y., Joveski, Z., & Yu, S. (2017). Does communication help people coordinate? PLOS ONE, 12(2), e0170780. doi:10.1371/journal.pone.0170780

Walshe, K. and Rundall, T. (2001). Evidence-based management: From theory to practice in health care. The Milbank Quarterly, 79(3), pp.429-457.

Watanabe, S., Yoshida, T., Kono, T., Taketa, H., Shiotsu, N., Shirai, H., & Torii, Y. (2018). Relationship of trainee dentists' self-reported empathy and communication behaviors with

simulated patients' assessment in medical interviews. PLOS ONE, 13(12). doi:10.1371/journal.pone.0203970

Werder, O. (2017). Toward a humanistic model in health communication. Global Health Promotion.

Weston, W. W., Brown, J. B., & Stewart, M. A. (1989). Patient-centred interviewing part I: Understanding patients' experiences. Canadian Family Physician, 35, 147-151.

Willems, S., De Maesschalck, S., Deveugele, M., Derese, A., & De Maeseneer, J. (2005). Socio-economic status of the patient and doctor–patient communication: Does it make a difference? Patient Education and Counseling, 56(2), 139–146. doi:10.1016/j.pec.2004.02.011

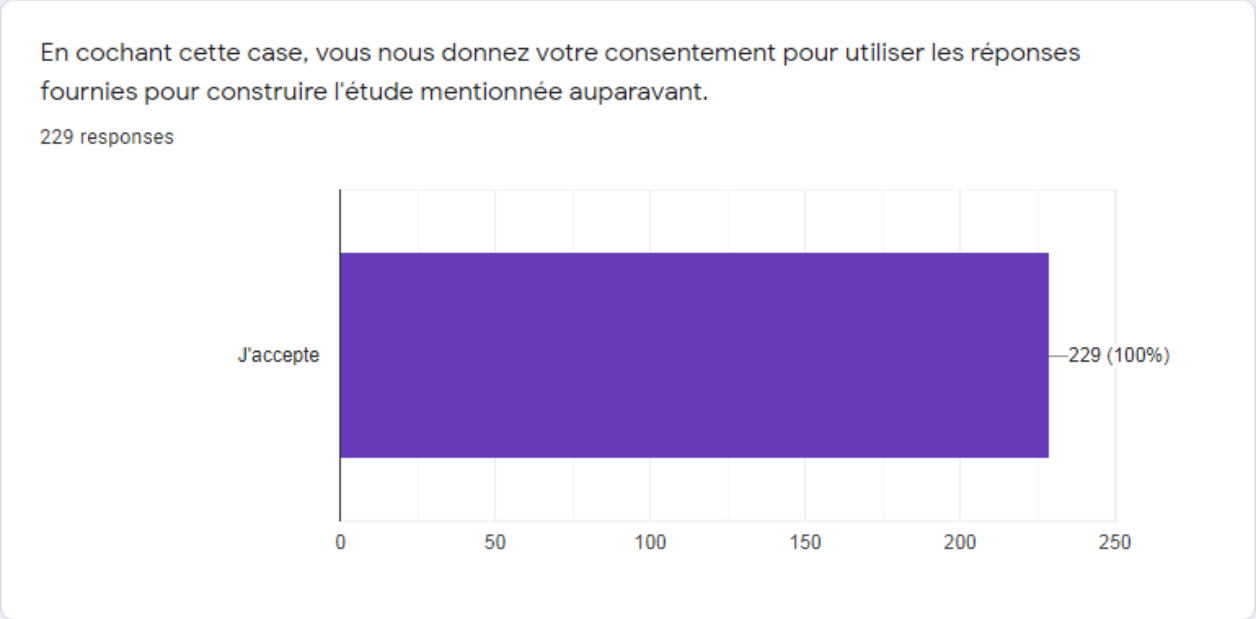
Woelber, J. P., Deimling, D., Langenbach, D., & Ratka-Krüger, P. (2012). The importance of teaching communication in dental education. A survey amongst dentists, students and patients. European Journal of Dental Education, 16(1), e200–e204. doi:10.1111/j.1600-0579.2011.00698.x

World Health Organization (2010). Monitoring the building blocks of health systems: A handbook of indicators and their measurement strategies. WHO Press. https://www.who.int/healthinfo/systems/WHO_MBHSS_2010_full_web.pdf?ua=

List of figures

List of tables

Annex 1



Kindly refer to Annex 2 for the original text in English.

Annex 2

Case study: Evaluation of communication in the dental health sector

This survey is part of an MBA thesis in Healthcare Management titled "The Impact of Evidence-based Communication on Healthcare: The Case of the Dental Health Sector in Morocco" and is meant to collect data from Moroccan dentists, practicing in both private and public sectors, in order to assess a variety of communication-related factors that they encounter with their patients, staff, and potentially other healthcare professionals during their daily practice.

This case study aims to offer communication-based solutions that would optimize the Physician-Patient relationship and lead to better health outcomes.

The data collected from this survey will remain anonymous. This being said, we will collect your email addresses in case we need complementary information that may be useful for our study.

Thank you for your cooperation in advance.

* Required

Email address *

Your email

By checking this box, you hereby give your consent to use the answers provided below to build the aforementioned case study. *

☐ I agree

Please state your age range *

- ◯ 23-29
- ◯ 30-39
- ◯ 40-49
- ◯ 50-59
- ◯ 60+

Please state your gender *

- ◯ Male
- ◯ Female

Please state the sector you're working in *

- ◯ Public sector
- ◯ Private sector

Diagnostic accuracy and adherence to treatment

Do you conduct a thorough anamnesis on the very first day? *

- ◯ Yes
- ◯ No

How do you evaluate your success rate in terms of diagnosis? *

- ◯ Low
- ◯ Average
- ◯ High

How do you evaluate your success rate in terms of treatment? *

- ◯ Low
- ◯ Average
- ◯ High

How often does your treatment result in post-operative complications? *

- ◯ Rarely
- ◯ Often
- ◯ Always

Do your patients take care of their dental hygiene as instructed? *

- ◯ Yes
- ◯ No

What do you think is the reason for their faulty dental hygiene?

- ◯ Ignorance
- ◯ Lack of motivation
- ◯ Unwillingness

Do your patients follow their treatment as prescribed? *

- ◯ Yes
- ◯ No

What do you think is the reason they don't adhere to treatment?

- ◯ Ignorance
- ◯ Lack of trust
- ◯ Unwillingness

In your opinion, what is the main reason behind patients' lack of cooperation? *

- ◯ Ignorance
- ◯ Prejudice
- ◯ Misunderstanding
- ◯ Caution
- ◯ Mistrust

Patient satisfaction and safety

How do you communicate with your patients? *

- ◯ In person
- ◯ Phone calls and/or texts
- ◯ Email
- ◯ Social media
- ◯ I don't

Choose your top 3 communication competencies that you successfully practice in your dental office/clinic *

- [ ] Active listening
- [ ] Empathy
- [ ] Responsiveness
- [ ] Friendliness
- [ ] Clarity
- [ ] Open-mindedness
- [ ] Respect
- [ ] Diplomacy
- [ ] Confidence
- [ ] None of the above

How do you remind your patients of their appointments? *

- [ ] Appointment card
- [ ] Phone call
- [ ] Text
- [ ] Email
- [ ] I don't

Which of the following medical devices do you have in your dental office/clinic? Check all that apply *

- [ ] Blood pressure monitor
- [ ] Blood glucose meter
- [ ] Thermometer
- [ ] Stethoscope
- [ ] None of the above

How often do you prescribe blood tests for your patients? *

- ◯ Never
- ◯ Whenever deemed necessary
- ◯ Always

How often do you follow up on your patients' general health? *

- ◯ Never
- ◯ Sometimes
- ◯ Always

In your opinion, what causes miscommunication between dentists and their patients? *

- ◯ Ignorance
- ◯ Lack of instructions
- ◯ Disobedience
- ◯ Prejudice

Do you engage with your patients' relatives? *

- Yes
- No

If you answered yes, when do you engage with your patients' relatives?

- Always
- Only if they're my patients too
- Only if the patient is senile, a child, or disabled

How often do you listen to your patients' complaints? *

- Never
- Sometimes
- Always

How do you deal with your patients' complaints? *

- I always take them into consideration
- I assess their validity
- I ignore them

What are your patients' usual complaints? *

- Pain
- Discomfort
- Esthetic satisfaction
- Oral functions

Team satisfaction

How do you communicate with your staff? *

- ◯ Face-to-face
- ◯ Phone calls and/or texts
- ◯ Email
- ◯ Written notes
- ◯ I don't

What does your staff complain about the most? Check all that apply *

- ☐ Undisciplined patients
- ☐ Occupational health issues
- ☐ Difficult co-workers
- ☐ Lack of communication

Do you train your staff to properly deal with patients' problems, needs and demands? *

- ◯ Yes
- ◯ No

In your opinion, what causes miscommunication between dentists and their staff? *

- ◯ Indifference
- ◯ Misunderstanding
- ◯ Negligence
- ◯ Rebellion

How do you communicate with other healthcare professionals regarding your patients? *

- ◯ In person
- ◯ Phone call
- ◯ Email
- ◯ Correspondence
- ◯ I don't

How often do you contact your chronically-ill patients' other healthcare professionals? *

- ◯ Never
- ◯ Occasionally
- ◯ Regularly

In your opinion, what causes miscommunication between dentists and other healthcare professionals? *

- ◯ Misinterpretation of information
- ◯ Lack of written reports
- ◯ Negligence
- ◯ Uncooperative patients

Malpractice risk

Do you keep a file of your patients' dental records? *

- ◯ Yes
- ◯ No

How do you store your patients' dental records?

- ◯ Physical records
- ◯ Digital records
- ◯ Both

Do you keep a file of your patients' medical history? *

- ◯ Yes
- ◯ No

If you answered yes, how do you keep up with your patients' medical history? Check all that apply

- [ ] Regular follow-up
- [ ] Correspondence with healthcare professional
- [ ] Blood tests
- [ ] File review

How do you explain your diagnosis and treatment to your patients? *

- ◯ I only explain the prescription
- ◯ I answer their questions
- ◯ I summarize their clinical case
- ◯ I describe the process in details
- ◯ I don't

Do you have a first aid kit in your dental office/clinic? *

- ◯ Yes
- ◯ No

Etude de cas: Evaluation de la communication dans le secteur dentaire

Ce questionnaire rentre dans le cadre d'un projet de fin d'étude de MBA en Management de Santé intitulé "L'impact de la communication sur les soins de la santé: le cas du secteur dentaire au Maroc" et vise à faire une collecte de données auprès des dentistes Marocains, exerçant dans les secteurs privé et public, dans le but d'évaluer un ensemble de facteurs liés à la communication auxquels ils font face avec leurs patients, équipe, et potentiellement d'autres professionnels de la santé lors de leur exercice quotidien.

Cette enquête vise à offrir des solutions de communication qui permettront d'optimiser la relation Praticien-Patient et de mener vers un meilleur impact sur la santé des patients.

Les données collectées dans ce questionnaire resteront anonymes. Toutefois, nous allons recueillir vos adresses email au cas où nous aurions besoin de complément d'informations qui nous seront utiles dans note étude de cas.

Nous vous remercions pour votre coopération.

* Required

Email address *

Your email

En cochant cette case, vous nous donnez votre consentement pour utiliser les réponses fournies pour construire l'étude mentionnée auparavant. *

☐ J'accepte

Prière de préciser votre tranche d'âge: *

- ○ 23-29
- ○ 30-39
- ○ 40-49
- ○ 50-59
- ○ 60+

Prière de préciser votre sexe: *

- ○ Masculin
- ○ Féminin

Prière de préciser le secteur dans lequel vous exercez: *

- ○ Secteur public
- ○ Secteur privé

Page 1 of 5

Next

Annex 3

Etude de cas: Evaluation de la communication dans le secteur dentaire

* Required

Précision du diagnostic et respect du traitement

Est-ce que vous menez un examen clinique complet lors de la première visite? *

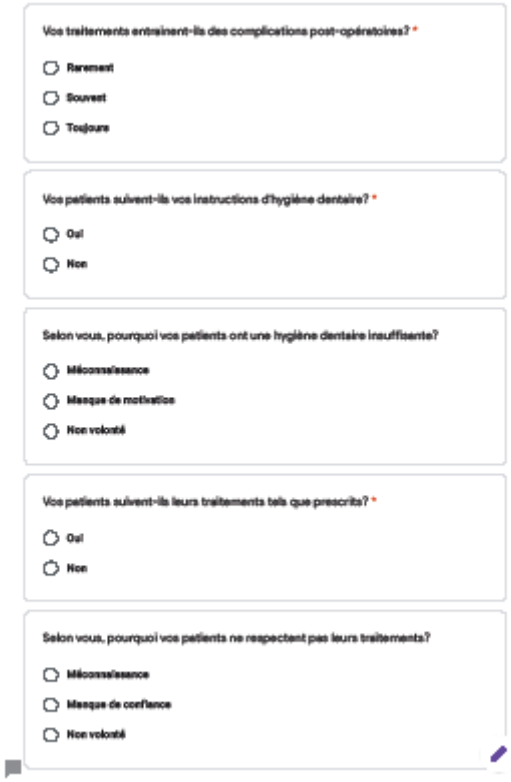
- Oui
- Non

Comment évaluez-vous votre taux de réussite en terme de diagnostic? *

- Faible
- Moyen
- Elevé

Comment évaluez-vous votre taux de réussite en terme de traitement? *

- Faible
- Moyen
- Elevé



Vos traitements entraînent-ils des complications post-opératoires? *

- Rarement
- Souvent
- Toujours

Vos patients suivent-ils vos instructions d'hygiène dentaire? *

- Oui
- Non

Selon vous, pourquoi vos patients ont une hygiène dentaire insuffisante?

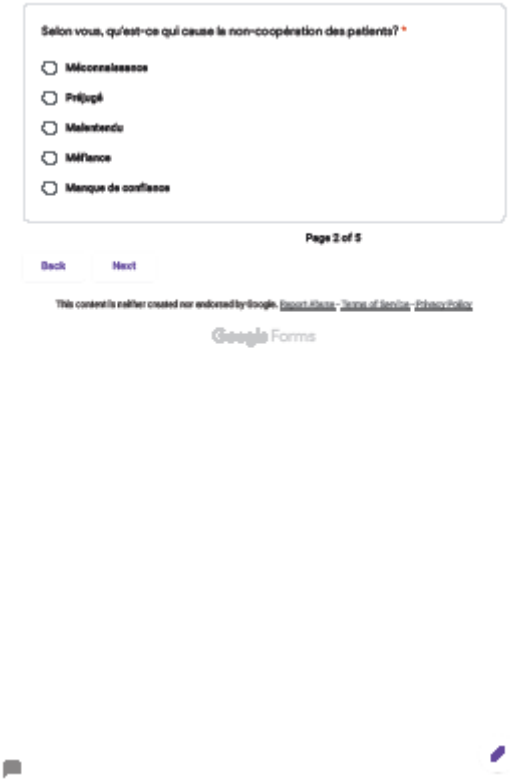
- Méconnaissance
- Manque de motivation
- Non volonté

Vos patients suivent-ils leurs traitements tels que prescrits? *

- Oui
- Non

Selon vous, pourquoi vos patients ne respectent pas leurs traitements?

- Méconnaissance
- Manque de confiance
- Non volonté



Selon vous, qu'est-ce qui cause le non-coopération des patients? *

- Méconnaissance
- Préjugé
- Malentendu
- Méfiance
- Manque de confiance

Page 2 of 5

Back Next

This content is neither created nor endorsed by Google. Report Abuse - Terms of Service - Privacy Policy

Google Forms

Etude de cas: Evaluation de la communication dans le secteur dentaire

* Required

Satisfaction et sécurité des patients

Comment communiquez-vous avec vos patients? Cochez tout ce qui convient *

- [ ] En personne
- [ ] Appels téléphoniques et/ou messages
- [ ] Email
- [ ] Réseaux sociaux
- [ ] Je ne communique pas avec eux

Choisissez 3 compétences de communication que vous pratiquez avec succès dans votre cabinet/clinique: *

- [ ] Ecoute active
- [ ] Empathie
- [ ] Réactivité
- [ ] Amabilité
- [ ] Clarté
- [ ] Ouverture d'esprit
- [ ] Respect
- [ ] Diplomatie
- [ ] Confiance
- [ ] Aucune de ces réponses

Comment rappelez-vous les rendez-vous à vos patients? Cochez tout ce qui convient *

- [ ] Carte de rendez-vous
- [ ] Appel téléphonique
- [ ] Message
- [ ] Email
- [ ] Je ne les rappelle pas

Parmi les dispositifs médicaux suivants, lequel possédez-vous en cabinet/clinique? Cochez tout ce qui convient *

- [ ] Tensiomètre
- [ ] Glucomètre
- [ ] Thermomètre
- [ ] Stéthoscope
- [ ] Aucune de ces réponses

À quelle fréquence prescrivez-vous des analyses sanguines à vos patients? *

- ◯ Jamais
- ◯ Au besoin
- ◯ Toujours

Selon vous, qu'est-ce qui cause les erreurs de communication entre les dentistes et leurs patients? *

- ◯ Méconnaissance
- ◯ Manque d'instructions
- ◯ Désobéissance
- ◯ Préjugé

Interagissez-vous avec les proches de vos patients? *

- ◯ Oui
- ◯ Non

Si oui, dans quelle situation interagissez-vous avec les proches de vos patients? Cochez tout ce qui convient

- [ ] Toujours
- [ ] Seulement s'ils sont également vos patients
- [ ] Seulement si vos patients sont âgés, mineurs, ou handicapés

Vous écoutez les doléances de vos patients: *

- ◯ Jamais
- ◯ Parfois
- ◯ Toujours

Comment vous prenez en charge les doléances de vos patients? *

- ◯ Je les considère toujours
- ◯ J'évalue leur validité
- ◯ Je les ignore

Quelles sont les doléances habituelles de vos patients? *

- ◯ Douleur
- ◯ Inconfort
- ◯ Esthétique
- ◯ Fonction

Vous suivez l'état de santé général de vos patients: *

- ◯ Jamais
- ◯ Parfois
- ◯ Toujours

Page 3 of 5

Back Next

Etude de cas: Evaluation de la communication dans le secteur dentaire

* Required

Satisfaction de l'équipe

Comment communiquez-vous avec votre équipe? *

- En personne
- Appels téléphoniques et/ou messages
- Email
- Mots écrits
- Je ne communique pas avec eux

De quoi votre équipe se plaint-elle le plus? Cochez tout ce qui convient *

- [ ] Patients indisciplinés
- [ ] Problèmes de santé liés à la profession
- [ ] Collègues difficiles
- [ ] Manque de communication

Est-ce que vous formez votre équipe pour gérer correctement les problèmes, besoins, et exigences des patients? *

- Oui
- Non

Selon vous, qu'est-ce qui cause les problèmes de communication entre le dentiste et les autres professionnels de santé? *

- Mauvaise interprétation d'informations
- Manque de rapports écrits
- Négligence
- Patients non-coopérants

Page 4 of 5

Back Next

Selon vous, qu'est-ce qui cause les problèmes de communication entre le dentiste et son équipe? *

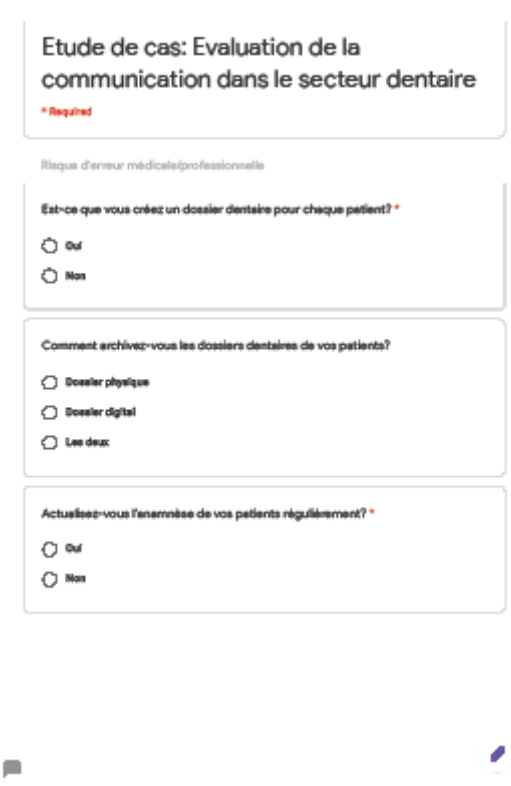
- Indifférence
- Malentendu
- Négligence
- Révolte

Comment communiquez-vous avec les autres professionnels de santé à propos de vos patients? *

- En personne
- Téléphone
- Email
- Correspondance
- Je ne communique pas avec eux

À quelle fréquence contactez-vous les professionnels de santé de vos patients à risque? *

- Jamais
- Occasionellement
- Régulièrement



Etude de cas: Evaluation de la communication dans le secteur dentaire

* Required

Risque d'erreur médicale/professionnelle

Est-ce que vous créez un dossier dentaire pour chaque patient? *

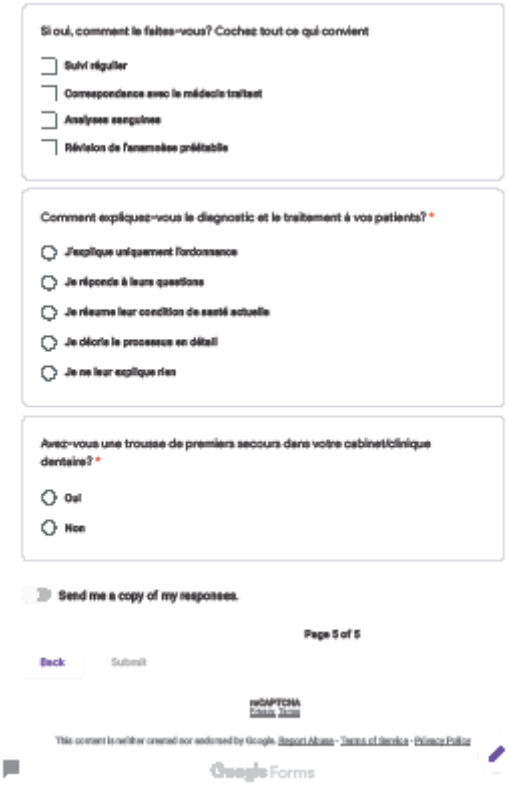
- Oui
- Non

Comment archivez-vous les dossiers dentaires de vos patients?

- Dossier physique
- Dossier digital
- Les deux

Actualisez-vous l'anamnèse de vos patients régulièrement? *

- Oui
- Non



Si oui, comment le faites-vous? Cochez tout ce qui convient

- [ ] Suivi régulier
- [ ] Correspondance avec le médecin traitant
- [ ] Analyses sanguines
- [ ] Révision de l'anamnèse préétablie

Comment expliquez-vous le diagnostic et le traitement à vos patients? *

- Jl'explique uniquement l'ordonnance
- Je réponds à leurs questions
- Je résume leur condition de santé actuelle
- Je décris le processus en détail
- Je ne leur explique rien

Avez-vous une trousse de premiers secours dans votre cabinet/clinique dentaire? *

- Oui
- Non

Send me a copy of my responses.

Page 5 of 5

Back Submit

reCAPTCHA

This content is neither created nor endorsed by Google. Report Abuse - Terms of Service - Privacy Policy

Google Forms