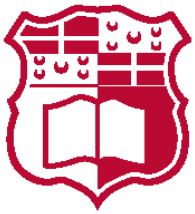

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Associating bounded ethicality and quality decisions amongst medical professionals

Submitted in partial fulfilment
of the requirements of the
Degree of Master of Science in
Strategic Management and Digital Marketing

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November, 2023

ABSTRACT

The decision-making process is not as straightforward as it might seem, but it is rather influenced by several factors that can determine whether the final choice an individual will undertake will correspond to an ethical or unethical action. This holds not just in general life situations, but also in more specific contexts such as healthcare, where emotions must not predominate over critical thinking.

While it has been proven that both individuals and decisions are susceptible to biases and are ethically bound, further investigation is required to fully comprehend the current state of the healthcare sector. Because of this, the research aims to understand to what extent junior medical professionals engage in bounded ethicality, and how this impacts on quality decisions.

The investigation was conducted by using a mixed methodology, which combined the vignettes representing four fictitional scenarios and the standard questionnaire of quality decisions. While the former was made up of both a Likert-type scale ranging from strongly disagree to strongly agree and a space where the junior doctors were asked to provide a brief explanation of the selected score, the questionnaire presented five different scores: Not at all, Sometimes, Frequently, Often and Always. In this respect, the sample was composed of six junior doctors, three females and three males, who had been practicing medicine for a period comprised between one month and one year. Additionally, the collected data was examined from a qualitative and quantitative perspective.

The results obtained have shown that junior professionals do engage in bounded ethicality in some cases, especially when it is particularly complex to identify an ethical dilemma. This has been supported by examining the qualitative data of the investigation, namely the explanations given by each participant for every presented scenario. Additionally, the proposition that bounded ethicality is not associated with quality decisions was not upheld through the

quantitative analysis, which has shown that instead of being convergent, the results are mostly divergent.

Besides exploring the topic of bounded ethicality in the healthcare context, the investigation conducted by the researcher has contributed to an important understanding: the further development of ethical guidelines and theoretical frameworks is essential for the improvement of the ethical decision-making process in healthcare for both professionals and patients who deserve the best possible care.

ACKNOWLEDGMENTS

A special thanks goes to all those who have supported and accompanied me on this essential educational and life journey.

Firstly, I would like to express my gratitude and appreciation for my supervisor Professor Pierre Mallia, and my advisor Professor Vincent Cassar. Your consistent guidance and support, together with your valuable advice, have allowed me to continuously grow throughout the whole year and to carry out this relevant research project.

Additionally, I would like to thank Professor Steve Agius for his important help with the data collection.

I would also like to acknowledge the faculty of Economics, Management, and Accountancy and its professors, who have passed on fundamental values to us, not only academically or professionally, but also from a personal and growth perspective.

Furthermore, I would like to thank all the junior doctors who have shown interest in the study, to the point of participating and devoting part of their time to this research.

Last but not least, I wish to thank my family, my better half, and my friends for their constant encouragement and for motivating me throughout my journey. A significant thought goes to my international friends, who have been the greatest discovery and who have never left me alone, no matter what.

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CHAPTER 1: INTRODUCTION

1.1 Introduction

This project concerns ethics and ethical decision-making in the workplace.

Nowadays, most organizations own an ethical code that not only provides guidelines and instructions that must be followed both by employers and employees but also clarifies what is considered to be acceptable and not acceptable at the workplace.

This first chapter of the dissertation is an overall introduction to the topic under investigation and begins by providing a brief explanation of the scope of this research project. Chapter One also illustrates the aims of the study, together with the Research Questions. Finally, it sets out the structure of the remaining chapters of the research investigation.

1.2 Overview and Relevance of the Study

The concept of ethics has been researched and reviewed by scholars worldwide (e.g. Solomon, 1984; Freeman and Gilbert, 1988; Carroll, 1991; Ciulla, 2004; Desjardins, 2009), hence leading to different interpretations and definitions that can be compared and contrasted.

Among them, one in particular reveals the significance of the topic: “Ethics is not able to make people’s lives perfect in this empirical world that already exists, but it can stop or reduce certain harms.” (Robin, 2009, p.140)

Human beings are presented with a variety of decisions every day, among which some might be more or less ethical than others (Kern and Chugh, 2009). As a consequence, individuals might encounter problems in identifying the right choice.

Hence, this research project introduces the notion of ethicality in decision-making and presents multiple models that have been developed over the years. The importance here relies not only on the decision itself but also on the reasoning behind it.

Nonetheless, past research has often demonstrated that being aware of the significance of ethics and the ethical decision-making process is not enough, primarily because of other factors that might influence a single decision (March and Simon, 1958; Chugh et al., 2005; Chugh and Bazerman, 2007). Among them, bounded ethicality plays a major role.

Its relevance in this research project is the severity of the topic because it does not only apply to everyday life circumstances but also to more specific sectors such as healthcare, where emotions and uncertainty must not prevail. Medical professionals are usually required to make decisions based on limited evidence and time, therefore being subject to internal and external pressures that might influence the quality of the final decision (McManus, 2019).

This condition might lead to potential errors, which can be highly risky in the healthcare sector (Sexton et al., 2000). Examples are misdiagnosis, failure to provide necessary care to patients and to monitor them extensively, and misunderstandings amongst the professionals of the healthcare team.

However, even if to err is human, determined risks can be diminished or perhaps erased through awareness and knowledge (Kohn et al., 2000). Nonetheless, the scope of this research and its results are not meant to discredit the healthcare sector and its professionals in any way, who should instead be thanked every day for their hard work, but rather to improve the quality of decisions and reduce the chances of making mistakes.

1.3 Aims of the Study and General Research Questions

The aims of the study are threefold.

First, it identifies a thorough background on Ethics and the Business World, researching how the situation has evolved in the past few years up to the present time. Indeed, ethics has often been considered a controversial topic interpreted differently all over the world. Therefore, it is important to ease and clarify the understanding of the concept itself, as well as of the consequences related to the individual's choices, before being able to explore more in-depth the concept of boundness. Secondly, it evaluates the frequency and propensity of junior medical professionals to be caught up in bounded ethicality. Finally, it assesses how potentially engaging in bounded ethicality may affect the quality of the decisions undertaken by junior medical professionals. This is particularly helpful for understanding the current situation in the healthcare sector and for increasing awareness related to this specific topic.

To achieve these aims, the research project will follow a mixed method approach, which combines two data collection methods that will be complementary to each other: the vignettes approach and the questionnaire on quality decisions.

For this reason, the two Research Questions are:

RQ1: To what extent do junior medical professionals engage in bounded ethicality?

RQ2: How does bounded ethicality impact quality decisions?

1.4 Overview of the Chapters

The remaining chapters will include:

Section B: Literature Review

- Chapter 2: The ethical decision-making process
- Chapter 3: Bounded ethicality in the healthcare sector: quality decisions and risks

Section C: Methodology & Results

- Chapter 4: Methodology

- Chapter 5: Results

Section D: Discussion & Conclusion

- Chapter 6: Discussion
- Chapter 7: Conclusions, limitations and recommendations

Chapter 2 discusses the complexities of the ethical decision-making process. It provides a detailed background on business and ethics, allowing the researcher to introduce the more general aspects of the area of the investigation. This chapter intends to provide a critique of the various definitions and theoretical perspectives on ethics, with its pros and cons respectively. It then focuses on the ethical decisions, as well as on the role of bounded rationality and bounded ethicality in this context, which might influence the individual's choices.

Chapter 3 intends to focus more on the specificity of the topic. Hence, the spotlight is on the subject of bounded ethicality in the healthcare sector, followed by a journey that guides the reader through the understanding of quality decisions and risks related to the considered industry. Doing so allows the reader to be fully prepared for the methodology chapter, which introduces the more practical side of the investigation.

Chapter 4 explains the research design and provides a detailed description of the methods chosen to answer the Research Questions. The research follows a purely inductive approach due to the assumption that multiple dimensions of ethics might come up during the investigation, rather than one unique dimension. Furthermore, it is a mixed method that combines two different data collection modalities that are considered to be complementary to each other: the vignettes approach, made up of both a qualitative and quantitative part, and the questionnaire regarding quality decisions.

Finally, Chapter 4 includes ethical considerations related to the study. Participation is entirely voluntary, with the possibility to withdraw from the investigation at any time and without justification. Moreover, data is anonymous, names of the participants are not disclosed and

consent forms with detailed explanations of what is expected are given to all the individuals involved in the investigation.

Chapter 5 is reasonably straightforward, as it reports all the results achieved with this investigation that are analyzed according to the Research Questions. It is divided into two parts, specifically: Part A (Qualitative Analysis) and Part B (Quantitative Analysis).

Chapter 6, instead, brings together the findings included in the previous chapter with the knowledge acquired through the two chapters of the literature review. Hence, it describes both the theoretical and practical implications based on the results of the research investigation.

Finally, Chapter 7 provides conclusions and limitations regarding the study, and recommendations for future research.

1.5 Summary

This opening chapter has set the aims and the purpose of the study, as well as the general Research Questions addressed in this research project. Finally, it has briefly explained the structure and content of the subsequent chapters.

The next chapter is dedicated to the literature review related to the ethical decision-making process. Besides providing background on business and ethics, it deals with ethical decisions and the theory behind bounded rationality and bounded ethicality.

Section B: Literature Review

CHAPTER 2: THE ETHICAL DECISION-MAKING PROCESS

2.1 Introduction

Human beings are the main characters of a constant decision-making process which, based on the circumstances, may present more or less complexities such as dealing with cognitive biases, emotions, and time pressure, and may be less or more ethical.

This chapter highlights the evolution of ethics in the business world, by taking the reader on an imaginary journey across multiple years. It then provides distinctive interpretations and perspectives on ethics, with the identification of one definition that will be adopted for this research project. Finally, Chapter 2 defines what constitutes an ethical decision and introduces the concepts of "Bounded Rationality" and "Bounded Ethicality".

2.2 Ethics and the Business World

According to De George (1987), the history of business ethics is relatively recent, and five different stages can be recognized in its development: before 1960; between 1960 and 1970; the 1970s; the first half of the 1980s; and the second half of the 1980s.

Before 1960, the concepts of morality and ethics started to be applied to businesses, as well as politics, family, and different aspects of life. However, the second stage (1960-1970) saw the rise of social issues in businesses, which eventually led to the first development of the field of business ethics in the 1970s. Moving forward, the fourth stage was characterized by the institutionalization of business ethics, which in the second half of the 1980s started to be defined and differentiated from ethics in business (De George, 1987).

In less than a decade, the concept of business ethics had reached scholars from all over the world, who enriched the subject matter by providing various definitions and interpretations. Specifically, in the 1970s only ten articles had been released on the subject of business ethics, which became fifty-four in the 1980s (Tenbrunsel and Smith-Crowe, 2008). A study conducted by Kish-Gephart et al. in 2019, instead, showed that researching business ethics on platforms that allow access to multiple databases (e. g. Web of Science) generates over three thousand hits. Hence, a rising number of authors has progressively become interested in this subject area, allowing research in this field to prosper.

In particular, according to Weihrich and Koontz (1994), business ethics deals with truth and justice and incorporates aspects that vary from the expectations of society to corporate behavior in the home country or abroad. Stodder (1998), instead, argues that talking about ethics, fairness, and integrity, is a requirement for the business community.

Boone and Kurtz (2005) highlight the importance of the principles of integrity and fairness, and state that behaviors and decisions in the business environment are dictated by business ethics. For the authors, indeed, this field is considered the standard of conduct and moral values. Finally, Velasquez (2009) interprets business ethics as a study of what is considered to be morally right or wrong, whereas for Gerde et al. (2019, p. 916) it is "aimed at connecting ethics and the economy to achieve general welfare".

All the different above-mentioned interpretations capture the essence of business ethics differently. Specifically, while some of them focus more on how actions affect a person, a company, or society as a whole, others give value and importance to the economic side of a corporation, such as the profit a company derives. Either way, organizations can benefit from business ethics for a variety of reasons: it improves the business' reputation, guarantees its ongoing development, and supports the achievement of valid levels of customer satisfaction.

As a result, the essence of business ethics is captured by its capability to positively contribute to an organization's success and progress (Jalil et al., 2010).

Nonetheless, the 21st century has been characterized by important so-called "ethical failures" in businesses, which have generated doubts about what the role of ethics is (Bishop, 2013). A common example is the Great Recession, which hurt national economies around the world and has been the result of an ethical failure. However, to completely understand the role of ethics, it is necessary to define it and select one definition that will be the most suitable for this investigation.

2.3 Defining Ethics

Before discussing what constitutes an ethical decision in more detail, it is worth taking a step back and defining ethics. However, is it truly possible to provide the right definition of it?

When reflecting on ethics, the most plausible thought regards the identification of "what is right and what is wrong". Nonetheless, past research conducted by various authors (e.g. Ciulla, 2004; DesJardins, 2009; Velasquez, 2009) has demonstrated that ethics is much more than that. It does not only involve everything right or wrong, but it also deals with the reasons why things are considered to be right or wrong (Bishop, 2013).

2.3.1 Theoretical Perspectives on Ethics

The word "ethic" has its roots in the Greek language, and it specifically comes from the word "ethos". It means "the character, custom or a set of moral behavior that is accepted extensively" (Jalil et al., 2010, p. 146).

Based on its etymology, multiple authors started interpreting ethics in a similar, but at the same time a different way. First, Solomon (1984) argues that ethics includes both individual character (being a good person) and morality. Hence, this strictly relates to what is considered to be right or wrong, as well as to what is morally acceptable or not acceptable within a society. However, while Solomon (1984) focuses more on the social rules that guide an individual's conduct, Freeman and Gilbert (1988) and Carroll (1991) believe ethics represents the understanding and perception of what is right and fair. Hence, having personally comprehended which acts and practices are allowed, individuals embrace ethical responsibilities even if they are not codified into legislation. Therefore, the former interpretation is more objective, whereas the latter is rather subjective.

Furthermore, Ciulla (2004) provides another perspective on the topic, by defining ethics as a "reflective process" (p.27) and a "communal exercise" (p.28) in which individuals make an effort to understand their rights and obligations to others in society. The author then highlights that, even though an individual's behavior must comply with the standard of the group, the latter is a "collection of individual values" (p.29).

Although all the above-mentioned interpretations truly represent definitions of ethics, none of them is completely suitable for this research project. However, to understand the reasoning behind this statement, one more concept needs to be introduced: the ethical code.

Berwick et al. (1997) believe that an ethical code would be timely and orienting for some industries such as healthcare, and it would represent a point of reference for the decision-making process. On the other hand, Pattison (2001) and Thompson (2002) suggest that an ethical code is not flawless and, besides presenting terminological inexactitudes, it might also generate confusion.

Moreover, values and norms usually vary between nations and cultures; hence potentially leading to misunderstandings which might cause consequences.

By taking this into account, it can be noticed that (1) the focus on social norms (Solomon, 1984), (2) the subjective interpretation of what is right or fair (Freeman and Gilbert, 1988; Carroll, 1991), and (3) the compliance with the standard of the group made up of individual values (Ciulla, 2004), either lack an element or are only partially appropriate for this study.

In the first case, deciding only based on social norms or an ethical code might potentially create confusion, due to the lack of consideration of the whole picture. Individuals' perspectives might slightly or significantly contrast with the social interpretation of what is right or wrong, thereby causing internal conflicts. In the second case, the authors only take into account the individual's perception of what is right or fair. In the third and final case, the focus on individual values might lead to disagreements.

Therefore, for the rest of the study, the researcher intends to adopt the definition provided by Desjardins (2009) and Velasquez (2009), according to which ethics is the perception of morality. Specifically, it is one's capability to choose between what is considered to be right or wrong, acceptable or not acceptable, good or bad.

The main reason behind this choice is that the dissertation not only deals with ethics as such but more in depth with bounded ethicality which will be subsequently explained in detail. Hence, understanding what influences and motivates individuals to make a determined decision is only one part of the process; the other one, instead, deals with the reasoning behind it. Even though this might sound clear and straightforward, real-life situations are dominated by a variety of factors that might prevent a human being from making the right ethical choice.

2.3.2 Ethical Decisions

Defining an ethical decision is not a straightforward matter, as different models have been developed over time. In particular, one of the most recurrent models is the one provided by

Rest (1986). The author does not come up with a definition of the topic, but he rather identifies four different stages that all together constitute an ethical decision:

1. The recognition of an ethical or moral issue;
2. The judgment against ethical standards;
3. The understanding of the significance of the ethical component of the decision;
4. The action undertaken based on ethical criteria and principles.

This four-stage model has represented an important starting point for many authors, and later research has built upon it (Zeni et al., 2016).

For this reason, after defining an ethical decision, Jones (1991) further expands the model constructed by Rest (1986). According to Jones (1991), an ethical decision is "both legal and morally acceptable by the larger community" (p.367). He further argues that issues are assessed in terms of moral intensity, or the degree to which a situation necessitates action based on principle. However, concerning stage 3 of the previously considered model, he also notices that not all ethical issues are of the same moral magnitude. Both of these interpretations highlight that ethical decision-making is a conscious process (Zeni et al., 2016). On the other hand, Haidt (2001) states that in reality subconscious processes constitute the basis of conscious judgment.

These different perspectives have been combined by Reynolds (2006) who integrates a two-stage model (conscious and subconscious processing) with the four-stage model discussed before.

It is therefore possible to summarize the distinctive perceptions and interpretations of the authors in the following model:

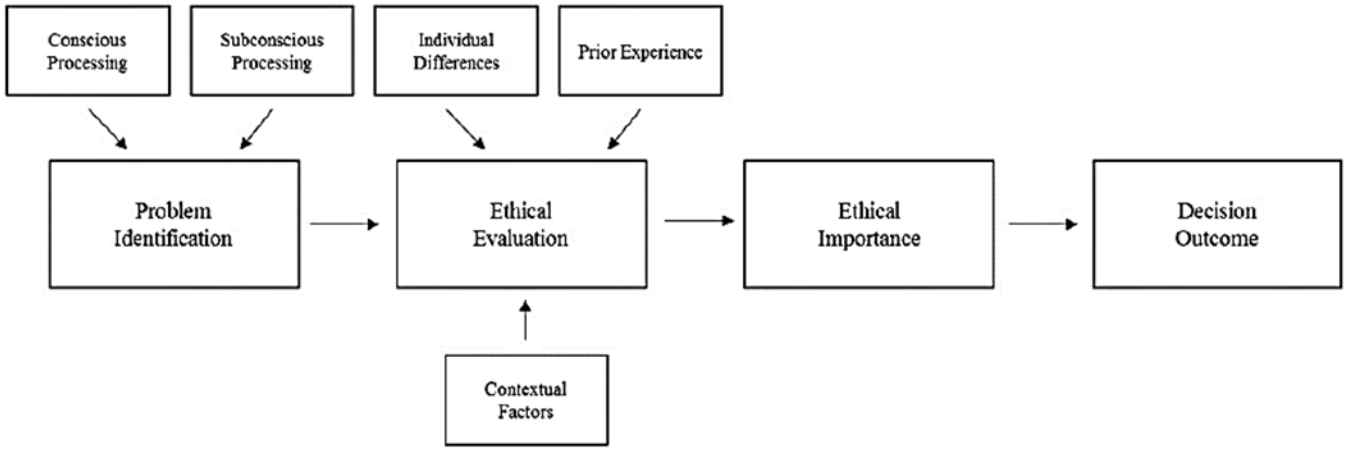

Figure 1- Synthesized ethical decision-making model (Source: Making "sense" of ethical decision-making (Zeni et al., 2016))

Problem identification represents the first stage of this combined model and it is mediated both by conscious and subconscious processes. It is followed by ethical evaluation, namely the second stage, which is instead driven by individual differences, prior experience, and contextual factors. Stage three subsequently portrays the establishment of the ethical importance and significance of the problem, about all the other considered factors. Lastly, action is taken at stage four, which concludes the combined model represented in Figure 1, illustrating the complexities of the ethical decision-making process (Zeni et al., 2016).

Despite explaining the stages leading to moral behavior, this model does not consider the reasoning behind the process and the potential solutions for an ethical conflict (McDevitt et al., 2007).

Because of this, McDevitt et al. (2007) have developed a model of ethical decision-making that integrates the one constructed by Janis and Mann (1977) and the content variables taken into account by human beings when facing an ethical dilemma.

The "Conflict Theory Model of Decision Making" built up by Janis and Mann (1977) represents a solid framework for understanding decision-making and conflict resolution. It identifies (1) the conditions which precede the situation of conflict, (2) the mediating processes employed to make a decision, and (3) the consequences of that determined outcome.

Based on this, McDevitt et al. (2007) have considered all the primary content variables that might influence the ethical decision-making process. Some of them are individual, others instead depend on the external environment and context and are therefore called situational. Whereas the former is personal (such as age, gender, and religious beliefs) or relates to the level of confidence and individual beliefs of the decision-maker, the latter emphasizes how much a specific situation can influence the whole process.

The following figures constitute a graphic representation of the content variables and the complete model, to allow the reader to have a clear picture of the topic.

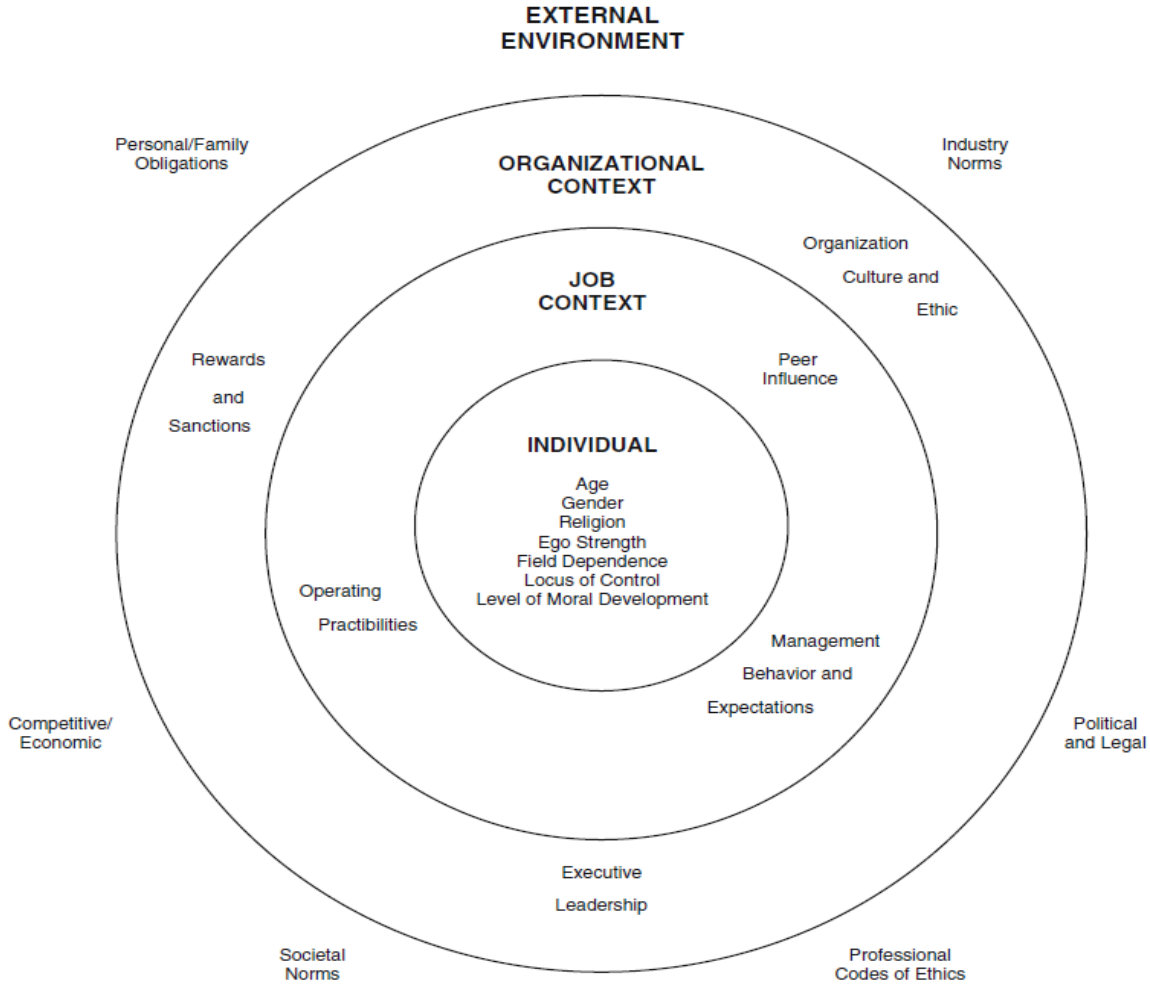

Figure 2 - Content Variables (Source: "A model of ethical decision making – the integration of process and content (McDevitt et al., 2007)

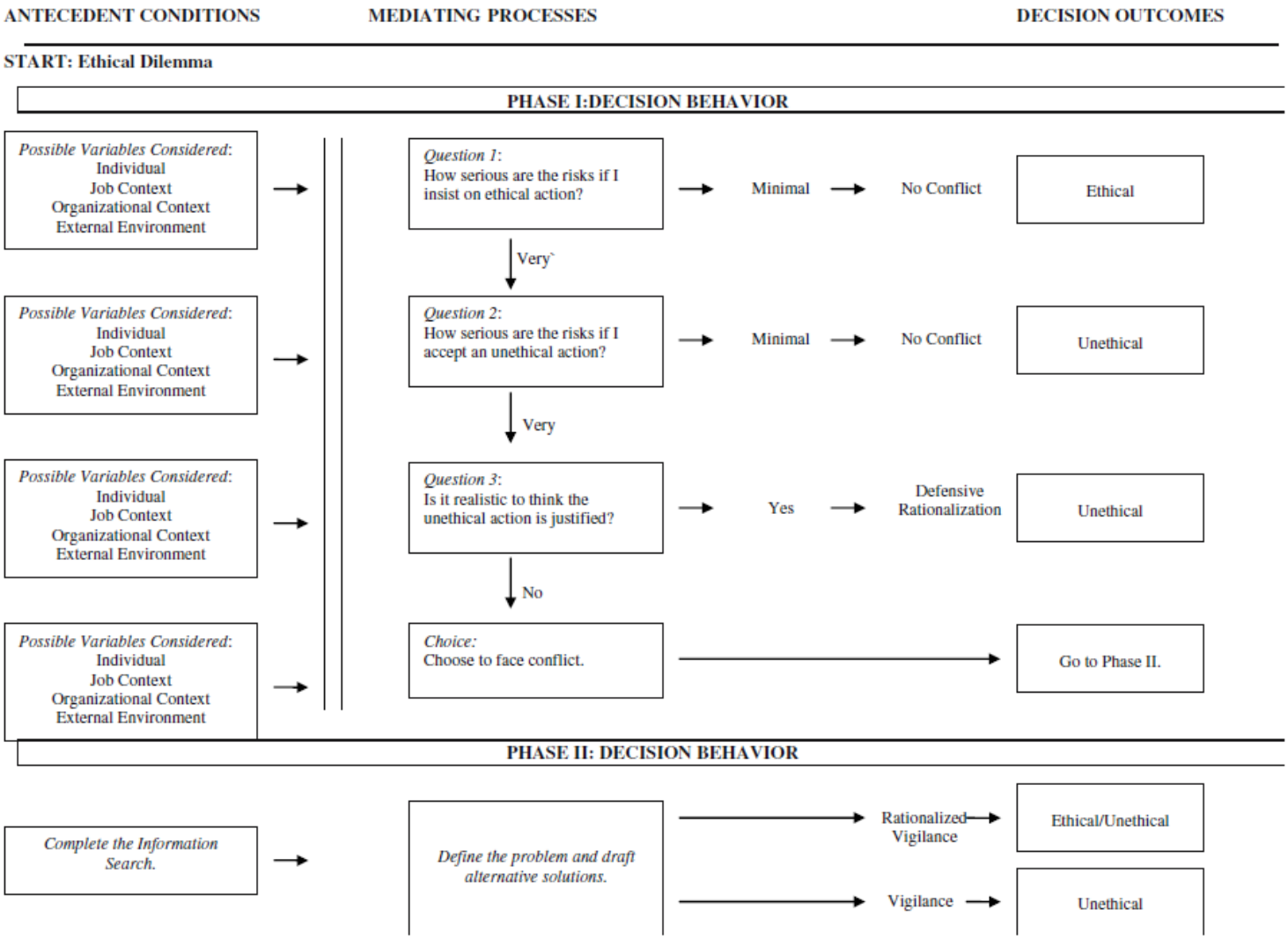

Figure 3 - Synthesized model of ethical decision making: the integration of process and content (Source: "A model of ethical decision making – the integration of process and content (McDevitt et al., 2007))

The understanding of this model is particularly helpful for the comprehension of the topic introduced in the following paragraph, namely "Bounded Rationality". This, together with the introduction of the concept of "Bounded Ethicality", will set the way for the third chapter of the dissertation, which will be the final one of the literature review.

2.4 Bounded Rationality and the Theory Behind It

Bounded rationality is a broad source of adaptability (Simon, 1976), through which individuals process the information that is relevant and of interest to them.

After several conflicting perspectives have emerged in the past (Lejarraga and Pindard-Lejarraga, 2020), two main divergent interpretations have been selected: “The glass half full” (Simon, 1979) and “The glass half empty” (Bendor, 2010).

The earlier perspective put forward by Simon (1979) emphasizes how humans satisfy their needs by employing heuristics, and characterizes the decision-making process as quick and doable for both individuals and businesses.

In particular, the procedural model of rationality developed by Simon in 1976 can help understand the psychological process of reasoning. This has then been clarified by Jones (1999) who recognized four characteristics related to this model: (1) as opposed to the alternative of behavior optimization, satisficing is the preferred option; (2) there is a tendency to create aspirational standards for each of the multiple objectives that the individual encounters; (3) rather than carrying out more than one task simultaneously, there is a propensity to do it sequentially, due to the barrier of the short-term memory; (4) there are some limitations on the organism’s capacity to organize long behavior sequences, because of the individual’s limited cognitive processes as well as the complexities of the external environment in which it interacts.

In other words, an alternative is considered to be satisficing if it meets aspirations across all the dimensions, namely attributes. In the case in which no satisficing alternative is initially found, a search for new alternatives is conducted. However, while this process is undergoing, aspirations along one or more dimensions steadily decline until a suitable new alternative is developed or an alternative that satisfies what already exists (Simon, 1976).

In this respect, Jones (1999) emphasizes the importance of the external environment, which can be considered as the objective reality existing on the outside, where every action has a consequence. Furthermore, it is also one of the content variables that might influence the ethical decision-making process introduced by McDevitt et al. (2007) in the model.

The latter view, on the other hand, stresses the errors made by cognitively limited decision-makers (Bendor, 2010). They misinterpret information (Hallen and Pahnke, 2016) and are limited in their ability to gather, understand, and process new knowledge (Cohen et al., 2018), as a result of their inability to appropriately assess the value of information (Yang, Lin and Peng, 2011).

These two controversial interpretations lead the way for one important distinction highlighted by Chugh and Bazerman (2007): the one between normative and descriptive views of behavior. The former claims that the human mind's ability to function is not restricted in any way, contrary to the latter which highlights that mental processes are instead bound in many different ways. This research project emphasizes the significance of the second perspective, which not only reflects bounded rationality but also two related aspects: bounded awareness and bounded ethicality.

While making decisions, people may fail to detect readily available information, even though they are aware of other information that is just as easily accessible and perceptible. This phenomenon is known as bounded awareness. Because of this, important information is often left out of focus (Chung and Bazerman, 2007). Additionally, there might be a failure to understand that there are more options to consider in a specific situation and individuals might not always comprehend the role of other parties involved in the overall decision-making process (Bazerman, 2014).

In simpler words, bounded awareness is strictly related to bounded ethicality and can influence the decision-making process (Bazerman and Sezer, 2016). For example, in some situations, people might have enough information to detect unethical behavior in an organization but fail to do so with important consequences for themselves, the others around them, and the organization as such.

In this respect, research conducted by Moore et al. (2006) has identified that individuals are capable of recognizing conflict of interest when it involves other people, but not when it concerns themselves. There is a tendency therefore to not notice unethical behavior and actions, thereby both directly and indirectly affecting bounded ethicality.

2.5 Bounded Ethicality

Bounded ethicality has been defined by Chugh et al. (2005) as the psychological mechanisms that cause people to engage in ethically and morally debatable behavior, which is conflicting with their preferred ethics. In simpler words, the authors argue that if individuals had had more time to reflect on the decision, this would result in a different outcome.

Everyone is subject to bounded ethicality; yet, only a few truly comprehend how far individuals' actions might go from the morality they strive for (Bazerman and Sezer, 2016).

Furthermore, Greenwald and Banaji (1995) argue that these psychological mechanisms are neither unpredictable nor uncommon, but rather constitute a model of bounded ethicality which has been used by scholars (e.g. Bazerman and Tenbrunsel, 2012) as a starting point for their research.

Specifically, Bazerman and Tenbrunsel (2012) have employed this model to understand how bounded ethicality contributes to the explanation of phenomena in which there is a discrepancy between one's desired and actual moral conduct. For instance, bounded ethicality within organizations can clarify a wide range of occurrences in which people are not as ethical as they believe, intend, or desire to be (Tenbrusel and Smith-Crowe, 2008). In this regard, one of the most common examples is being strongly influenced by a conflict of interest, which can have consequences and repercussions on the individual's life (Moore et al., 2005).

This original model of bounded ethicality has been repeatedly mentioned by scholars and professionals over time. Nonetheless, Chugh and Kern (2016) state that it contributes more to

the comprehension of the phenomenon of bounded ethicality and less to the psychological processes that underlie bounded ethicality. This has led to the development of a new model ("2.0") aimed at extensively explaining the topic and its related characteristics.

Therefore, the definition adopted by the researcher for bounded ethicality for this study is: "The systematic and ordinary psychological processes of enhancing and protecting our ethical self-view, which automatically, dynamically, and cyclically influence the ethicality of decision-making" (Chugh and Kern, 2016, p.86). This (1) emphasizes the importance of systematic and ordinary mechanisms, (2) allows bounded ethicality to illustrate both ethical and unethical moral conduct, (3) introduces the role of the self and automaticity, and at the same time (4) captures the underlying processes that were never really studied in depth.

Before considering how the model itself works, an assumption needs to be made: self-view prevails over self-interest. Specifically, bounded ethicality argues that understanding how ethical behavior develops in people and organizations depends primarily on one's self-view (or the interest in oneself) rather than their interests (Chugh and Kern, 2016).

Taking this into account, the "2.0" model is: asymmetric, dynamic, and cyclical.

Being asymmetric in this case refers to presenting a different sequence of events taking place on the right side of the figure as opposed to the left. However, this sequence of events strictly depends on what happens in the middle of the figure, thereby explaining why the model is also dynamic. In particular, this contingency dictates whether the individual's moral conduct will lean more to the right or the left side of the figure, demonstrating that even the same person might present a different ethical behavior based on the circumstances.

Finally, the model is cyclical because there is not a clear beginning or end to how it plays out in reality.

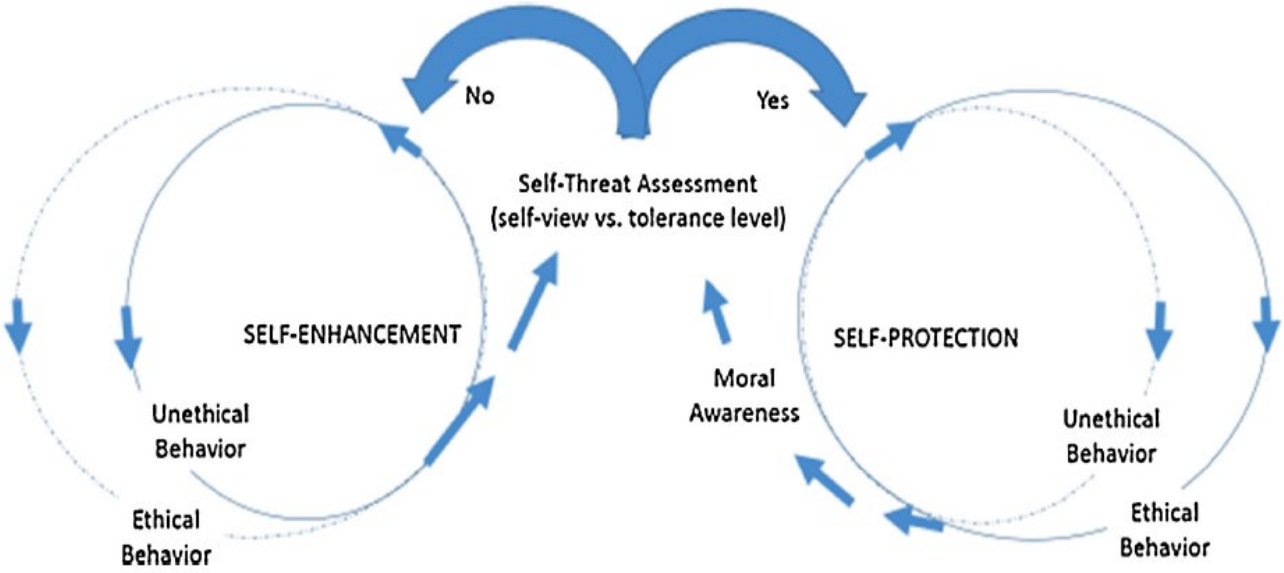

Figure 4 - Bounded ethicality model (Source: "A dynamic and cyclical model of bounded ethicality (Chugh & Kern, 2016))

As can be noticed from Figure 4, moral behavior is dependent on the self-threat assessment which is positioned in the middle of the figure and which is the process of evaluating one's level of threat to one's self-perception as an ethical person. This establishes which of the two processes, namely self-enhancement (on the left of the figure) or self-protection (on the right of the figure), will be employed by the individual during the decision-making process. While self-enhancement corresponds to a lower self-threat and is aimed at boosting the positivity of the self-view, self-protection coincides with a greater self-threat and its techniques tend to reduce the negativity of the self-view (Alicke and Sedikides, 2009; Sedikides, 2012). These processes happen repeatedly, thereby emphasizing the cyclical nature of the model which creates an ongoing pattern that includes self-threat assessment, self-enhancement, and/or self-protection. This eventually leads to undertaking an ethical or unethical action.

However, despite presenting a dual cycle model, the authors (Chugh and Kern, 2016) highlight that the "2.0" bounded ethicality model does not correspond to a dual process model. Whereas in the former two distinctly different processes are involved, in the latter two very much alike processes occur at the same time.

Indeed, the asymmetry between self-enhancement and self-protection cycles represents the core of the new bounded ethicality model, which is also dynamic as what happens next is highly influenced by what happened before.

By looking carefully at the figure, there is one last component that has not been considered yet: moral awareness. According to Butterfield et al. (2000), moral awareness is the understanding that a person's possible choice or behavior might have an impact on their own or others' interests, welfare, or expectations in a way that might be inconsistent with one or more ethical norms. Furthermore, moral awareness is also the first step of the previously considered ethical decision-making model created by Rest (1986) and subsequently modified by (Jones, 1991) and Reynolds (2006).

Even though there is no guarantee that the involvement of moral awareness will certainly lead to an ethical decision, research conducted by Tenbrunsel and Smith-Crowe (2008) has demonstrated that moral awareness does push individuals to make decisions that are more likely to be ethical choices. Therefore, moral awareness affects how sensitive one is to ethical self-threats, which in turn increases the likelihood that self-protection will be required. As a result, the conclusion is that moral consciousness plays a relatively minor role in the process of self-enhancement and a relatively major role in the process of self-protection.

Hence, when self-threat is present, moral awareness is fully revealed, enabling individuals to understand the ethicality of their choices more clearly (Chugh and Kern, 2016).

In this regard, it is important to highlight that this concept of boundness is not only theoretical but can be applied to different everyday life situations or industries such as healthcare, which will be the focus of this dissertation.

2.6 Summary

This first chapter of the literature review has had a major focus on the ethical decision-making process. It has retraced the history of business ethics throughout the years, provided different definitions and interpretations of ethics, and selected one definition considered to be the most appropriate for this research project. Moving forward, Chapter 2 has explored the notion of ethical decision, by examining distinctive models which have been developed over time. It has subsequently introduced the concept of bounded rationality and the theory behind it. This does not only include theoretical perspectives on this topic but also two related components that need to be considered to have a clear understanding: bounded awareness and bounded ethicality. The latter has been dealt with in a general context and has extensively explained one of the most relevant models regarding this topic. Since the understanding of the model can support the comprehension of the more practical side of bounded ethicality, the topic will be examined in the more specific context of the healthcare sector in the next chapter of the dissertation, namely Chapter 3. Furthermore, the third chapter will provide an understanding of quality decisions and risks related to this selected industry, hence concluding the section of the literature review.

CHAPTER 3: BOUNDED ETHICALITY IN THE HEALTHCARE SECTOR: QUALITY DECISIONS AND RISKS

3.1 Introduction

This chapter focuses on the involvement of bounded ethicality in the healthcare sector and highlights potential ethical dilemmas and their repercussions on real-life situations.

Moreover, as every decision has consequences, Chapter 3 deals with the quality of these decisions and the risks that can be specifically met in the healthcare industry.

3.2 Bounded Ethicality in the Healthcare Sector

As mentioned earlier, bounded ethicality has been defined as the limitations that human beings encounter in the decision-making process, even if they have every intention to behave ethically (Chugh et al., 2005).

In general, individuals are all subject to implicit and explicit cognitive biases (Greenwald et al., 2022) and often find themselves in stressful situations in which their judgment is very likely to be distorted by emotions (McManus, 2019). Whereas implicit biases do not manifest in a direct, but rather indirect manner, and can influence both an individual's judgment and moral conduct, explicit biases are the opposite. Indeed, the latter acknowledges preconceptions of which their holders are aware (Greenwald et al., 2022).

Both implicit and explicit biases are particularly relevant in this case, as they are a component of the decision-making process. However, it is common knowledge that every decision has a consequence and an outcome, which can be notably risky in the specific sector of healthcare.

It is therefore important that the decision-making process conducted in this environment is ethical, especially because of the different circumstances in which bounded ethicality can play a major role.

Among them, four principal examples have been identified and will be discussed in more in-depth: conflicts of interest, limited resources, social pressures, and medical errors.

According to Robertson et al. (2012), healthcare professionals may find themselves in a situation of conflict of interest when there is either a financial or a personal interest that might influence the decision-making process. For example, the choice of a medical drug or device may not be taken in the best interest of the patient, but rather to benefit the doctor or the organization as such.

Moreover, in a situation of crisis like COVID-19, ethical dilemmas can be represented by limited resources such as medication or even hospital beds. In such cases, medical professionals are asked to make tough decisions regarding who needs to be prioritized for hospitalization, possibly generating unequal distribution of medical resources among patients (Farrell et al., 2020).

Furthermore, social pressures from colleagues, patients, or the healthcare organization, can influence a medical decision. For instance, this can happen in those situations in which professionals want to avoid disappointing the patient or to meet hospital targets, even if they are aware that it is not the right call.

Finally, a common issue is the cover-up of human mistakes (Sexton et al., 2000), which according to research conducted by Al-Assaf et al. (2003) can generally fall into one of the following four categories: diagnostic, treatment, preventive, and other.

As it is possible to understand from the name, diagnostic mistakes are those that happen during the diagnostic procedures and which can lead to an error or a delay in the diagnosis. There are different reasons why this happens, but studies directed by Goldberg et al. (2002) have demonstrated that being overloaded with procedures or not knowing the whole patient's history might lead to wrong or zero tests, thereby generating a misdiagnosis.

Treatment errors, instead, occur when a mistake is made during a test or a procedure. They are strictly related to diagnostic errors, as a misdiagnosis can be followed by a delay in treatment. As a consequence, more complicated procedures may be required, hence increasing the risk of making a mistake (DeCoster et al., 1999).

Moving on, preventive mistakes can be caused by failure to provide the necessary treatment or the absence of necessary post-care treatment, which might eventually lead to complications (Lesar, 1997).

Ultimately, the last category is the one represented by general failures, such as miscommunication, and problems related to medical equipment (Cuthrell, 1996) or the overall organizational system (Al-Assaf and Schmele, 1994).

As previously mentioned, one of the major issues in the healthcare system is the lack of medical error reporting, which primarily happens because of fear of being punished (Al-Assaf et al., 2003). It is therefore important to adopt procedures that can progressively contribute to the diminishment of these mistakes, thereby slowly creating a safer healthcare system.

For instance, the creation of ethical frameworks capable of directing decision-making, advancing transparency, and prioritizing patient welfare would be a step forward. This may entail rules and practices that encourage ethical behavior and decision-making as well as specific training programs for healthcare professionals.

Taking this into account, it is clear by now how sensitive the medical environment is.

For this reason, the last topic that needs to be considered before concluding the literature review section regards the importance of quality decisions and the prevention of risky mistakes, which will both be explored and explained in the following paragraph.

3.3 Quality Decisions and Risks Related to the Healthcare Industry

Quality decisions are crucial in the healthcare industry since they ensure the safety and well-being of patients, as well as the correct functioning of the overall medical system.

This topic has been researched and investigated not only by scholars such as Melnyk and Fineout-Overholt (2019) or Hughes and Ortiz (2005) but also by relevant healthcare institutions (e.g. Institute of Medicine, 2001; Institute for Healthcare Improvement Open School for Health Professions, 2012), to provide extensive explanations and examples of the issue.

In particular, according to Melnyk and Fineout-Overholt (2019), quality decisions in healthcare are those that are made based on the best available evidence. The authors believe that, by using evidence-based practice, patients are very likely to receive the most efficient, effective, and above all appropriate, therapies and treatments.

Yet, how can the evidence-based practice be interpreted? And is it a valid indicator of quality? Sacket et al. (2000) argue that evidence-based practice is the thoughtful application of the best available data when making decisions that regard patient care. In this respect, most of the quality indicators considered in healthcare measure the degree to which professionals and organizations adhere to widely recognized, research-based practices. For instance, a common indicator is to check whether blood sugar is controlled in diabetic people.

However, Blumenthal (2004) argues that, despite these kinds of practices are relevant for healthcare and should always be taken into account, they might not be a valid indicator of decision quality. Rather, they can be interpreted as indicators of performance.

Hence, the author believes some more work needs to be conducted about evidence-based practice and quality decisions, to be fully able to comprehend and explain the overall situation.

Furthermore, the issue of quality decisions has been extensively considered by the Institute of Medicine (2001), which was formed in June 1998 with the intent and aim to substantially

improve the healthcare industry in the following ten years and then in the future (Richardson, 2001).

Specifically, a report was released by the Institute of Medicine in 2001. Even though the report thoroughly discusses major and minor steps that need to be taken to improve the overall industry, the first section in particular is dedicated to the quality of decision-making in healthcare.

This first section has been summarized by the author (Wolfe, 2001) in six aims that are essential for the improvement and prevention of risky mistakes, namely: safety, effectiveness, patient-centeredness, time, efficiency, and finally equity.

Whereas safety is aimed at preventing people from getting hurt because of the cure they are receiving, effectiveness refers to providing services to all those who can benefit from them and reducing services for all those who are not likely to get any benefit from them.

Moreover, every decision will have to be made based on patient-centeredness, thereby taking into account the patient's needs, preferences, and values. This is also strictly related to time and efficiency, both aimed at avoiding delays and/or procedures that can be harmful to the patient. Finally, the last aim is represented by equity, which ensures that healthcare does not vary based on individual characteristics, such as gender, age, race, and so on. Everyone has to be treated in the same way.

This quality decision framework has also been highly recommended by the Institute for Healthcare Improvement Open School for Health Professions (2012), which is an international organization aimed at promoting relevant changes to improve healthcare.

In this regard, the prevention of medical mistakes has also been discussed by Hughes and Ortiz (2005), who identify four different lines of defense that can be used in healthcare for error minimization.

The first one is represented by the prescribing clinician, who should include in the prescription all the most relevant information related to a specific drug or treatment, such as proper dosage, benefits, and even potential risks. Furthermore, accuracy and completeness of the patient's medical history are required, as it is crucial to have complete and up-to-date knowledge about medication choices (Leape, 1995; O'Shea, 1999).

For the second line of defense, the medical staff in charge of dispensing the medication plays a fundamental role. It is their task to check the received prescriptions and to determine their appropriateness in light of crucial factors like allergies, test results, and so on. In addition, they are responsible for ensuring that the requested medication is administered in the right quantity, form, and frequency (Hughes and Ortiz, 2005).

Moving on, the third important step for the prevention of medical mistakes is represented by the individuals (usually nurses) who are in charge of actually giving the patients their medications. In reality, this role might often overlap with the one of the medical staff which is responsible for the second line of defense. Therefore, making sure that the needed drug has been prescribed and has been administered in the right dose and ways, goes hand in hand (Pape, 2003).

Finally, the fourth line of defense is represented by the patient, who has always the possibility to ask the medical personnel why a determined drug has been selected. It is also possible that by doing so, potential new allergies or issues related to the medication are encountered.

Even though patients play a very important role in this scenario, the main problem is that they are not always actively engaged. Therefore, this fourth line of defense can only be applied in some cases, whereas the rest of them need to rely on the procedures of the three aforementioned steps (Hughes and Ortiz, 2005).

In particular, the previously discussed model is summarized in the following figure:

QUESTIONS TO ASK		ACTIONS TO TAKE
When preparing to give medication:		
Right drug	• Has the patient been given this medication before? • Given the patient's symptoms and diagnosis, does it make sense for the patient to have this medication?	• Determine if the patient has any known drug allergies or sensitivities. • Assess the patient's other medications to detect possible contraindications. • Make sure it is the right medication; packaging, labeling, and spelling of some drugs look alike. • Have another person double check all medications.
Right reason	• Do the patient's condition, symptoms, and health status warrant receiving this medication?	• Determine if the patient has the condition the medication is used for.
Right dose and preparation	• Is the correct dose being administered? • How is the medication administered?	• Ensure labeling is legible and clearly understood.
Immediately before administering the medication:		
Right patient	• Is this the right patient to receive this medication?	• Verify the identity of the patient using at least two identifiers (check wristband, ask patient his name).
Right time	• Is this the correct time for the medication to be administered?	• Check when the medication was last administered. If the drug is new, document when it is first given.
Right route	• Is it appropriate to administer the medication orally, intravenously, or by injection?	• Check the original orders to verify the route of administration.
After the medication has been administered:		

Right drug, right dose, and right rate	• How is the patient responding to the medication?	• Monitor the patient to
		  • determine the efficacy of the drug.
		  • detect and prevent complication.
		  • evaluate and document changes in health status.
		• When applicable, assess the patient's laboratory values to detect changes.
		• Provide patient education, when possible, so patient is alert to adverse effects and changes in how he feels.

Figure 5 - Questions and steps to ensure the right administration of medications (Source: "Medication errors: why they happen and how they can be prevented (Hughes & Ortiz, 2005))

The combination of the quality decisions framework put forward by the Institute of Medicine (2001) and the four lines of defense explained by Hughes and Ortiz (2005), can contribute to the improvement of the healthcare sector and the reduction of medical mistakes.

However, this can only be accomplished if medical errors are regarded as a possibility to evaluate the treatment processes, as a means to understand what went wrong, as a way of learning from experience, and as adjustments that can be made for increasing prevention (Berwick and Leape, 1999; Institute of Medicine, 2001).

3.4 Summary

This last chapter of the literature review has considered the notion of bounded ethicality in the healthcare sector. In this regard, the ethical decision-making process plays an essential role, especially when it comes to the quality of the choices undertaken by medical professionals. Therefore, Chapter 3 has explored a quality decision framework that can be employed to improve the healthcare sector, and at the same time prevent medical errors as much as possible. The conclusion of the literature review section leads the way for Chapter 4, namely Methodology. The researcher will explain the research design and will provide a detailed description of the methodologies chosen to answer the Research Questions.

Finally, Chapter 4 will deal with the ethical considerations of the study, thereby ensuring that the investigation is conducted in compliance with the FREC framework.

Section C: Methodology & Results

CHAPTER 4: METHODOLOGY

4.1 Introduction

The two research questions were investigated using a mixed-method approach.

According to Creswell and Plano Clark (2018) and Plano Clark and Ivankova (2016), a mixed methodology consciously links the procedures, perspectives, analyses, and data types correlated to quantitative and qualitative research, to develop thorough understandings. Quantitative methods are primarily used for estimating quantities and, as a consequence, gathering numerical information (Avgousti, 2013). Qualitative methods are focused on individuals' perspectives in this investigation, thereby generating results that vary from person to person and allowing an interactive and dynamic process of gathering and analysis of data (Holloway, 1997).

The mixed method approach employed by the researcher can be divided into two parts: Part A and Part B. This chapter provides an in-depth explanation of both parts, with a focus on how the procedures were applied to accomplish the results outlined in the subsequent chapter, namely Chapter 5. Specifically, Chapter 4 presents six sections: research philosophy, participants, instruments and measures, data collection procedure, ethical issues, and data analysis.

4.2 Research Philosophy

According to Easterby-Smith et al. (1991), there are three important reasons why understanding the relevance of the research philosophy might positively affect an investigation: (1) it can support the researcher in outlining the entire research plan; (2) it allows the comparison of

many different techniques and methodologies, and the selection of the one that is the most appropriate for the study; (3) it can assist the researcher in stepping outside of his/her comfort zone and becoming innovative and creative.

Even though the concept of research philosophies is not always black and white, and therefore it is not always appropriate to mention one best research philosophy, the most suitable for this study is critical realism, which addresses the so-called "Crisis of positivism" (Bhaskar, 1991, p.140). This statement is justified by two reasons, both of which are correlated to the methodology chosen to pursue this investigation. In the first place, presenting junior doctors with vignettes related to the healthcare industry will not presume that bounded ethicality necessarily exists. It will support the researcher in gaining an understanding of how doctors interact with various events in particular circumstances. Subsequently, as already proven by the previous justification, there is a double component of subjectivity and objectivity.

4.3 The Participants

The doctors who took part in the research were all selected from the labor pool at Mater Dei Hospital. Although the researcher had initially designated two samples for this investigation, namely Sample A (Junior doctors) and Sample B (Senior doctors), due to major issues that will be addressed in detail in Chapter 7, the study eventually involved six junior doctors.

According to the British Medical Association (2017), the term "Junior Doctor" refers to any medical graduate who accesses the labor pool on a two-year program of work-based training. The specific sample was made up of three females and three males, each of which had been practising medicine for some time comprised between one month and one year. They were all asked by the researcher to take part in the qualitative and quantitative study.

4.4 Instruments and Measures

Given the nature of the research, namely mixed methodology, both qualitative and quantitative tools were developed for the data collection.

The Vignettes

For the study, four different vignettes representing fictitional scenarios were developed by the researcher after having consulted the literature review related to this topic, as well as the most frequent errors in the healthcare sector and the best ways to prevent medical mistakes.

A vignette is "a story about individuals, situations, and structures which can refer to important points in the study of perceptions, beliefs and attitudes" (Hughes, 1998, p.381). It is an approach that is particularly suitable for sensitive topics, and it can allow the researcher to explore attitudes and perceptions that participants may otherwise not be willing to disclose or that may elude their awareness (Hughes, 1998). Moreover, Gould (1996) strongly supports the idea that using vignettes generates the great advantage of reducing the likelihood of participants being impacted by the act of observation.

Specifically, the aim of this tool in the current investigation is to help assess whether junior medical professionals do engage in bounded ethicality and whether, and how, this might impact quality decisions.

Each case scenario did not represent a real-life situation that doctors had personally encountered but rather showed potential circumstances that might happen anywhere in the healthcare sector. By doing so, the scenarios are more accessible, can be better controlled by the researcher and there is a simultaneous enhancement of both internal and external validity (Atzmuller and Steiner, 2010; Hox et al., 1991).

Precisely, the junior doctors were asked to carefully and thoughtfully read each vignette and provide an answer to the given questions, through a Likert-type scale made up of five stages:

strongly agree, agree, neither agree nor disagree, disagree, strongly disagree. Every stage corresponded to a score, which progressively ranged from strongly disagree (1) to strongly agree (5). In addition to the Likert-type scale indicating the five possible scores, the researcher was also interested in the reasoning behind the score provided by each doctor. Therefore, a written explanation was also required, asking individuals taking part in the research to briefly state the motivations that led to the final answer. A copy of the vignettes and their related questions is attached in Appendix One. Additionally, scenario one can be consulted as an example:

"A collegue (nurse) comes to tell you that the day before he took the day off because he wanted to watch a football match. Now, he is asking you to issue a sick leave certificate.

You need to work with this nurse on a daily basis, you are on good terms and you know that if you don't issue the certificate he will start acting differently (e. g. calling you in the middle of the night, creating unnecessary problems)."

Would you issue the certificate?

○ Strongly disagree ○ Disagree ○ Neither agree nor disagree ○ Agree ○ Strongly agree

Briefly state why

_____

_____

_____

Figure 6: Vignette 1

The Questionnaire

The standard questionnaire regarding the quality of the decision-making orientation scheme developed by Donelan et al. (2015) was taken into consideration by the researcher. This tool was created following the completion of a qualitative investigation on the variables affecting

the making of high-quality decisions (Donelan et al., 2015). The results of the considered qualitative study not only highlighted the many decision-making focuses made by stakeholders but also identified the characteristics of good decision-making procedures that stakeholders may embrace at the individual and organizational levels. A better comprehension of how the decision-making process was approached by different individuals made it possible to find or support better decision-making procedures that potentially benefit the organization as a whole as well as the single individuals. However, after having analyzed the questionnaire in depth, the researcher noticed that not all of its components were suitable and appropriate for this specific study. The reason is that the current investigation does not consider the organizational level of influence (e.g. Item 1: "My organization evaluates the impact of the decisions I make", Donelan et al., 2016, p.4) and the organizational culture (e.g. Item 13: "My organization has suffered a negative outcome due to slow decision-making", Donelan et al., 2016, p.4), but only the individual-level influences. Therefore, the rearranged tool was given to the participants. The questionnaire was limited to the individual level and it was composed of twenty-six questions regarding the individual's decision-making process (e.g. Item 1: "My decision-making is knowledge-based, Donelan et al., 2016, p.5). The possible answers were five: (1) Not at all, (2) Sometimes, (3) Frequently, (4) Often, (5) Always.

Whereas all the first twenty-four questions regarded the individual's decision-making process, the last two were inserted to gain demographic data of the participants, namely the number of months they had been practicing medicine and their gender. In this case, the answer was open. This was only introduced to have a general overview of the individuals taking part in the research, but in no way did this affect the investigation as such or was it inevitable or irreplaceable for the study. A copy of the standard questionnaire of quality decisions is attached in Appendix Two.

The Information Letter and Consent Form

The information letter and consent form were an essential part of the research. The former had an informative purpose, meaning it contained all the information the participants needed to be aware of to decide whether or not to take part in the study. Not only were the aims illustrated in detail, as well as what was asked from the participants, but the information letter also clearly stated their rights. Finally, it provided the junior doctors with the contact of the researcher and the supervisors, to make sure that they had everything they needed to make an informed decision.

The latter, instead, specified more in detail the terms of participation in the research study, and needed to be signed by the junior doctors if they agreed to be involved in the investigation.

A copy of the information letter given to the participants is attached in Appendix Three. A copy of the consent form is attached in Appendix Four.

4.5 Data Collection Procedure

While originally the intention was to contact and invite participants via email to take part in the project, eventually it was decided to adopt a snowball sample approach whereby participants suggested other peers to collaborate and take part in the study. Once agreed, they were asked to pick up a folder containing one information letter, two consent forms already signed by the researcher, one data collection tool, and one sigilled envelope from an office at Mater Dei medical school, which the researcher had previously agreed on. The participants were given a time frame of approximately fifteen days to complete everything. No formal follow-up was conducted. Upon completion, each doctor was then asked to go back to the office at Mater Dei Medical School, and deposit one signed consent form in one folder and one sigilled envelope containing the actual data collection tool in another box. By doing so, in no way could the researcher understand the identity of the doctors while analyzing the results.

4.6 Ethical Issues

The whole project was conducted in full compliance with the FREC forms, to ensure that it adhered to the determined ethical standards. Participation was entirely voluntary and no one was coerced to take part in the study. All subjects were informed through the information letter and consent form about the research study, to be able to familiarise themselves with the project, their involvement, and the ethical considerations. The consent form also provided a clear explanation of the rights of each participant, together with the instructions that were followed to guarantee the proper storage and use of data. Data remained anonymous at all stages of the investigation; hence, the names of the participants were never disclosed to third parties and the researcher was never aware of the identity of the junior doctors while analyzing the results. Finally, given the sensitivity of the topic, the study was conducted to avoid any damaging effect or psychological, social, physical, or legal harm on the participants.

Proof of the above-mentioned statements is the submission of the REDP (Research Ethics and Data Protection) form with Application ID FEMA-2023-00376, endorsed and approved by the supervisor and advisor.

4.7 Data Analysis

Quantitative Data Analysis

The data collected in the quantitative part of the study involved collecting nominal and numerical data. This was initially organized in an Excel database and was subsequently exported in an electronic data sheet using IBM SPSS version 28.0.

Given the nature of the research project, the major interest was to understand whether there was a degree of convergence or divergence in the answers provided by the junior doctors involved in the investigation. The reason behind this is represented by the fact that

professionals are bound to strong ethical guidelines and are trained to deal with specific cases in the same way.

Therefore, the researcher reported both the scores of the vignettes and the scores of the questionnaire in SPSS, to be able to analyze the former against the latter. Specifically, the analysis focused on each item more in detail, rather than considering the questionnaire globally. Because of this, a bivariate nonparametric correlation was performed between the single instances of the four vignettes, namely the seven questions, and the questionnaire's single items. However, given that in some cases no answer was provided by the participants, to allow the system to recognize the missing values, they have been substituted with 999 and have been labeled as missing.

Qualitative Data Analysis

The data collected for the qualitative analysis regarded the reasoning behind the vignettes' score provided by each junior doctor; hence, each paper presented the motivation that led each participant to select a determined score on the Likert-type scale ranging from strongly agree to strongly disagree.

As explained above, it was important to understand whether the answers provided by each junior doctor either converged or diverged, taking into account the degree of subjectivity included in the vignettes. Comparing each explanation supported the researcher throughout the whole process, allowing us to understand whether medical professionals engage in bounded ethicality and whether this does or does not impact (and how) quality decisions.

4.8 Summary

Chapter 4 has summarized the whole process that led to the dissertation writing, emphasizing how the project gradually developed, despite the major issues encountered during this journey.

The following chapter, which is Chapter 5, will show the results obtained from the research and will provide an initial answer to the research questions.

CHAPTER 5: RESULTS

5.1 Introduction

This chapter qualitatively explores more in detail the reasoning conducted by each participant to select a determined score on the Likert-type scale proposed with the vignettes (Part A). Subsequently, Chapter 5 describes the analyses employed using IBM SPSS version 28.0 to quantitatively analyze the gathered data (Part B). While Part A provides an answer to the first research question, "To what extent do junior medical professionals engage in bounded ethicality?", Part B instead answers the second research question, "How does bounded ethicality impact quality decisions?".

5.2 Part A: Qualitative Analysis

From a qualitative perspective, each junior doctor was asked to explain the reasons that led him/her to choose a specific score on the Likert-type scale for each scenario of the vignettes. Given that the training that those professionals receive aims at teaching them how to deal with a determined case in the same way, the expectation would be to get congruent and convergent responses. However, the results acquired through this investigation show that this is not always the case, specifically because the reasoning of some of the participating doctors is almost the opposite of the others. The answers can be found in Table 1, showing an element of subjectivity which will be better discussed in the following Chapter.

	Junior doctor 1	Junior doctor 2	Junior doctor 3	Junior doctor 4	Junior doctor 5	Junior doctor 6
Vignette 1	Wrong and unfair	Illegal	Try to explain the legal implications of the action in a friendly manner	Illegal	Illegal and against policy	A sick leave certificate is a legal document and therefore would refrain from issuing one
Vignette 2	Speak to someone for advice; conflict between patient confidentiality and keeping such information	Notify the consultant and discuss the matter with the police	/	Discuss with the consultant	Would discuss it with colleagues and seniors; may likely write it in the file	Ethical duty to report such cases to the police – principle of justice
Vignette 3	Dangerous actions can affect patient safety, which is a priority	Talk to the colleague first; if the problem is recurrent would inform the supervisor	Talk to the doctor first, and if patients' lives are at risk report him/her	/	Depending on the severity of the mistakes	Patient's safety is at risk; therefore would report it to a senior doctor
Vignette 4	Respect the patient's wishes	Would discuss the case with the senior	Medical notes are legal documents and it is the doctor's duty to report relevant information	Depends on what something significant means	Depends on the findings; if it is relevant, would write it down	Patient-doctor confidentiality must be respected, as long as it does not endanger other people

Table 1: Explanations provided by the junior doctors

As it can be noticed by looking at Table 1, the first and the third scenarios illustrate that the six participants do agree with each other, particularly stating respectively that issuing a sick leave certificate for a colleague who has not truly been sick is immoral and illegal, and that patient's safety is a priority and cannot be endangered. Therefore, reporting a colleague who comes to work after a hangover from alcohol and abuses mild drugs would be ethically right. The second and the fourth scenarios, however, are slightly more controversial than the previously considered two, and this is reflected in the results obtained. The real dilemma in both cases answers one question: "Am I breaking the patient-doctor confidentiality or am I doing what is morally and ethically right?". As shown in Table 1, respecting patient confidentiality is a

priority for some doctors, whereas for others the duty of reporting the matter to the authorities prevails in scenario two. On the other hand, while patient confidentiality has been put first by a couple of the junior doctors involved in the investigation, the other professionals support that, should something relevant be found while running the tests, the most ethical choice would be to write it down in the patient's file.

Having considered this, the qualitative results show that, instead of being convergent, they are in some cases truly divergent, demonstrating that the element of subjectivity prevails while responding to the cases.

5.3 Part B: Quantitative Analysis

Descriptive statistics, known as the graphical and numerical methods used to organize, present, and analyze data (Fisher and Marshall, 2009), are reported in Table 2. Specifically, included is the frequency of the answers given by the junior doctors for each item of the questionnaire, excluding the number of months they had been practicing medicine and their gender.

Questionnaire items	**Junior doctors' frequency Score 1.00**	**Junior doctors' frequency Score 2.00**	**Junior doctors' frequency Score 3.00**	**Junior doctors' frequency Score 4.00**	**Junior doctors' frequency Score 5.00**
My decision-making is knowledge based	0	1	0	4	1
My decision-making is consistent	0	0	2	3	1

I consider uncertainty and unknowns in my decision-making approach	0	0	3	1	2
I generate SWOT analyses in my decision-making	0	2	2	2	0
I present contingencies or achievable options as part of my decision-making	0	0	3	1	2
My decision-making is transparent	0	1	0	2	3
I understand the context of the decision I am being asked to make	0	0	1	2	3
I understand the importance of the decisions I make	0	0	0	2	4
I use a structured approach in my decision-making	0	0	2	1	3
I qualify the probability of success in my decision-making	0	0	2	3	1
I quantify the probability of success in my decision-making	0	0	2	3	1
I receive constant training in the science of decision-making	2	2	1	0	1
I use intuition or 'gut-feeling' in my decision-making	0	6	0	0	0

My professional experience is important when having to make challenging decisions	0	0	2	3	1
I can get emotional with my decision-making	2	4	0	0	0
I have experienced "paralysis by analysis" caused by my slow decision-making	2	4	0	0	0
I have experienced a negative outcome by a decision not being made	1	4	1	0	0
I do tend to make the same mistakes as in the past	2	4	0	0	0
Recent or dramatic events greatly impact my decision-making	0	3	3	0	0
My procrastination has at times unfortunately resulted in a negative outcome	3	3	0	0	0
My decision-making could be improved by assigning weights	0	2	2	2	0
I underestimate problems which adversely impact my decision-making	1	4	1	0	0
I procrastinate on projects which should have been terminated at an earlier stage	3	2	1	0	0
I feel I could make better quality decisions	0	5	0	1	0

Table 2: Frequency of participants' responses for each item of the questionnaire

As shown in Table 2, based on the frequencies of the scores selected by every participant for each item of the questionnaire, there is often a discrepancy between the junior doctors' responses. However, there is only one case that demonstrates a total agreement of the junior doctors who, concerning Item 13, all stated that they sometimes use intuition or gut feeling in their decision-making process.

Additionally, before proceeding with the remaining part of the data, the internal reliability and consistency for every item of the questionnaire were assessed through Cronbach's Alpha value. More in detail, the test estimates the extent to which the items within a measure all quantify the same underlying dimension. The system generated an overall result of 0.777 and a single result for the single items which can be consulted in Table 3. Considering that the cut-off point for acceptable levels of internal reliability is 0.7 (Bland and Altman, 1997), the level of acceptability of the questionnaire has been met.

Questionnaire items	**Cronbach's Alpha Value**
My decision-making is knowledge based	0.765
My decision-making is consistent	0.738
I consider uncertainty and unknowns in my decision-making approach	0.741
I generate SWOT analyses in my decision-making	0.772
I present contingencies or achievable options as part of my decision-making	0.741
My decision-making is transparent	0.765
I understand the context of the decision I am being asked to make	0.742
I understand the importance of the decisions I make	0.760
I use a structured approach in my decision-making	0.757

I qualify the probability of success in my decision-making	0.738
I quantify the probability of success in my decision-making	0.738
I receive constant training in the science of decision-making	0.765
I use intuition or 'gut-feeling' in my decision-making	0.778
My professional experience is important when having to make challenging decisions	0.738
I can get emotional with my decision-making	0.777
I have experienced "paralysis by analysis" caused by my slow decision-making	0.804
I have experienced a negative outcome by a decision not being made	0.761
I do tend to make the same mistakes as in the past	0.804
Recent or dramatic events greatly impact my decision-making	0.771
My procrastination has at times unfortunately resulted in a negative outcome	0.799
My decision-making could be improved by assigning weights	0.758
I underestimate problems which adversely impact my decision-making	0.791
I procrastinate on projects which should have been terminated at an earlier stage	0.801

I feel I could make better quality decisions	0.803
Overall	0.777

Table 3: Cronbach's Alpha Values

To understand the relationships between the multiple variables, the researcher took into consideration the difference between the correct score of each vignette (which was assigned before the beginning of the data collection) and the response given by each junior doctor. To ensure that the calculations were always performed in the same manner, the highest value (5) was assigned to the correct answer of the vignettes, and the junior doctors' answers were subtracted from it. This led to the creation of Table 4. Specifically, the higher the value the higher the difference, and as a consequence the higher the level of bounded ethicality. On the other hand, the lower the value given by the difference, the better the participant would act in a determined scenario.

In addition, whenever the table shows the following sign /, it means that no answer has been given by the participant.

	Junior doctor 1	**Junior doctor 2**	**Junior doctor 3**	**Junior doctor 4**	**Junior doctor 5**	**Junior doctor 6**
Vignette 1	1,00	0,00	1,00	1,00	1,00	0,00
Vignette 2	0,00	3,00	3,00	2,00	2,00	4,00
Vignette 2.1	2,00	/	3,00	2,00	3,00	4,00
Vignette 3	1,00	1,00	2,00	1,00	2,00	0,00
Vignette 3.1	1,00	/	0,00	1,00	1,00	0,00
Vignette 4	0,00	2,00	3,00	1,00	1,00	1,00
Vignette 4.1	2,00	2,00	3,00	1,00	2,00	1,00

Table 4: Final score given by the difference between the correct score and the response of the junior doctors

Upon completion of these first steps, the researcher performed Spearman's correlation analysis between every single item of the questionnaire and every instance of the vignette, meaning that instead of taking into account the four vignettes as a whole, the questions presented within each vignette were analyzed separately and singularly. All Spearman's correlation coefficients are

shown in Table 5 and the two-tailed significant values of the correlation coefficients are shown in Table 6.

Questionnaire Items	Would you issue the certificate?	You are a senior doctor; would you note this on the patient's file and notify the police about it?	Or would you keep it confidential that he has admitted murder?	Would you report this to your consultant?	Or would you ignore it because it is not your problem?	Would you accept this proposal?	And if you find something significant, would you keep your promise to not write it down on the file?
My decision-making is knowledge based	0.612	0.000	0.186	0.456	-0.612	0.180	0.365
My decision-making is consistent	0.335	-0.318	-0.471	-0.317	0.000	-0.492	-0.100
I consider uncertainty and unknowns in my decision-making approach	0.671	-0.461	-0.583	0.283	0.000	-0.066	0.433
I generate SWOT analyses in my decision-making	0.433	-0.369	-0.250	0.581	0.000	0.127	0.904
I present contingencies or achievable options as part of my decision-making	0.671	-0.461	-0.583	0.283	0.000	-0.066	0.433
My decision-making is transparent	0.783	-0.636	-0.825	0.417	0.323	-0.033	0.367
I understand the context of the decision I am being asked to make	0.783	-0.493	-0.761	0.217	0.167	-0.230	0.117
I understand the importance of the decisions I make	1.000	-0.746	-0.745	0.671	0.612	-0.220	0.335
I use a structured approach in my decision-making	0.112	0.127	0.177	-0.283	-0.645	-0.164	0.033
I qualify the probability of success in my decision-making	0.335	-0.318	-0.471	-0.317	0.000	-0.492	-0.100
I quantify the probability of success in my decision-making	0.335	-0.318	-0.471	-0.317	0.000	-0.492	-0.100
I receive constant training in the science of decision-making	0.000	-0.470	-0.108	-0.079	0.444	-0.688	-0.064
I use intuition or 'gut-feeling' in my decision-making	/	/	/	/	/	/	/

My professional experience is important when having to make challenging decisions	0.335	-0.318	-0.471	-0.317	0.000	-0.492	-0.100
I can get emotional with my decision-making	-0.500	0.000	-0.304	-0.894	0.167	-0.440	-0.671
I have experienced "paralysis by analysis" caused by my slow decision-making	-0.500	0.320	0.304	-0.335	0.167	0.000	-0.671
I have experienced a negative outcome by a decision not being made	0.000	-0.609	-0.471	-0.456	0.645	-0.898	-0.365
I do tend to make the same mistakes as in the past	-0.500	0.320	0.304	-0.335	0.167	0.000	-0.671
Recent or dramatic events greatly impact my decision-making	0.000	-0.503	-0.913	-0.316	0.667	-0.311	-0.211
My procrastination has at times unfortunately resulted in a negative outcome	-0.707	0.503	0.152	-0.738	-0.167	0.104	-0.738
My decision-making could be improved by assigning weights	0.433	-0.677	-0.306	0.000	0.761	-0.889	-0.258
I underestimate problems which adversely impact my decision-making	0.000	-0.348	0.000	0.000	0.645	-0.539	-0.365
I procrastinate on projects which should have been terminated at an earlier stage	-0.447	0.302	-0.059	-0.633	0.000	0.033	-0.783
I feel I could make better quality decisions	0.316	-0.270	0.186	0.566	0.408	-0.139	0.141

Table 5: Spearman's Correlation Analysis Coefficients

Questionnaire Items	Would you issue the certificate?	You are a senior doctor; would you note this on the patient's file and notify the police about it?	Or would you keep it confidential that he has admitted murder?	Would you report this to your consultant?	Or would you ignore it because it is not your problem?	Would you accept this proposal?	And if you find something significant, would you keep your promise to not write it down on the file?
My decision-making is knowledge based	0.196	1.000	0.764	0.363	0.272	0.733	0.477
My decision-making is consistent	0.516	0.539	0.423	0.541	1.000	0.322	0.850
I consider uncertainty and unknowns in my decision-making approach	0.145	0.358	0.302	0.586	1.000	0.902	0.391
I generate SWOT analyses in my decision-making	0.391	0.471	0.685	0.227	1.000	0.811	**0.013**
I present contingencies or achievable options as part of my decision-making	0.145	0.358	0.302	0.586	1.000	0.902	0.391
My decision-making is transparent	0.066	0.175	0.086	0.411	0.596	0.951	0.475
I understand the context of the decision I am being asked to make	0.066	0.321	0.135	0.680	0.789	0.662	0.826
I understand the importance of the decisions I make	/	0.088	0.148	0.145	0.272	0.675	0.516
I use a structured approach in my decision-making	0.833	0.810	0.776	0.586	0.239	0.756	0.950
I qualify the probability of success in my decision-making	0.516	0.539	0.423	0.541	1.000	0.322	0.850
I quantify the probability of success in my decision-making	0.516	0.539	0.423	0.541	1.000	0.322	0.850
I receive constant training in the science of decision-making	1.000	0.347	0.863	0.881	0.454	0.131	0.905

I use intuition or 'gut-feeling' in my decision-making	/	/	/	/	/	/	/
My professional experience is important when having to make challenging decisions	0.516	0.539	0.423	0.541	1.000	0.322	0.850
I can get emotional with my decision-making	0.312	1.000	0.619	**0.016**	0.789	0.383	0.145
I have experienced "paralysis by analysis" caused by my slow decision-making	0.312	0.537	0.619	0.516	0.789	1.000	0.145
I have experienced a negative outcome by a decision not being made	1.000	0.199	0.423	0.363	0.239	**0.015**	0.477
I do tend to make the same mistakes as in the past	0.312	0.537	0.619	0.516	0.789	1.000	0.145
Recent or dramatic events greatly impact my decision-making	1.000	0.310	**0.030**	0.541	0.219	0.548	0.688
My procrastination has at times unfortunately resulted in a negative outcome	0.116	0.310	0.807	0.094	0.789	0.845	0.094
My decision-making could be improved by assigning weights	0.391	0.140	0.617	1.000	0.135	**0.018**	0.621
I underestimate problems which adversely impact my decision-making	1.000	0.499	1.000	1.000	0.239	0.270	0.477
I procrastinate on projects which should have been terminated at an earlier stage	0.374	0.561	0.925	0.177	1.000	0.951	0.065
I feel I could make better quality decisions	0.541	0.605	0.764	0.242	0.495	0.793	0.789

Table 6: Two-tailed significant values of the correlation coefficients

Therefore, as can be noticed by looking at Table 5, both negative and positive relationships have emerged while running Spearman's correlation analysis between the individual items of the questionnaire and the instances of the vignettes. In particular, one perfect positive correlation has been identified between Item 8 of the questionnaire "I understand the importance of the decisions I make" and the first instance of the vignette "Would you issue the

certificate?". Additionally, among the significant correlations, some were notably strong (e.g. Item 4 of the questionnaire "I generate SWOT analysis in my decision-making" and instance seven of the vignette "If you find something significant, would you keep your promise to not write it down in the file?" presented a correlation coefficient of 0.904); others, instead, exhibited only a moderate association such as Item 18 "I do tend to make the same mistakes as in the past" and once again the first instance of the vignette "Would you issue the certificate?" which showed a correlation coefficient of -0.500. Moreover, the table illustrates weak associations as well, among which the one between Item 24 "I feel I could make better quality decisions" and the third instance of the vignette "Would you keep it confidential that he has admitted murder?" displayed a correlation coefficient of 0.186.

Lastly, in seventeen out of the twenty-four items, at least one occurrence of the vignettes generated a Spearman's correlation coefficient equal to zero, thereby indicating no association between the variables taken into consideration. As an example, the relationship between Item 1 of the questionnaire "My decision-making is knowledge-based" and the second instance of the vignette "You are a senior doctor; would you note this on the patient's file and notify the police about it?" can be highlighted.

However, considering the association alone would mean leaving behind the two-tailed significant values of the correlation coefficients reported in Table 6, which indicate whether it is statistically significant and whether to accept or reject the null hypothesis.

Since Spearman's correlation analysis intends to provide an answer to the second research question, "How does bounded ethicality impact quality decisions?", the null hypothesis represented is H0=Bounded ethicality negatively impacts the quality of decisions, whereas the alternative hypothesis is H1=Bounded ethicality positively impacts the quality of decisions. A review of the results, as depicted in the table, revealed that all but five of the cases (highlighted in red) presented p-values that were higher than the significance level of 0.05. This outcome

suggests that, in the majority of the cases, H0 cannot be ruled out and there is not sufficient statistical evidence to support H1. Thus, the results obtained support the hypothesis that bounded ethicality negatively impacts quality decisions.

However, it needs to be highlighted that the statistical significance is the likelihood that the observed difference between two groups or variables is the result of chance. If the p-value is greater than the selected alpha value, specifically 0.05, the general assumption would be that the explanation lies in the sampling variability or, in this case, in the limited sample (Sullivan and Feinn, 2012).

By looking once again at Tables 5 and 6, there is one more thing to consider, which is the situation of Item 13 of the questionnaire and all the vignettes. As it can be noticed, all the rows are empty and no Spearman's correlation coefficient and two-tailed significant values have been generated by the system. This is because the junior doctors were variable in the replies to the vignettes and consistent on the score to Item 13, which is therefore constant and cannot generate a value within Spearman's correlation analysis.

5.4 Summary

The results have been analyzed both qualitatively and quantitatively and illustrated in Chapter 5. Specifically, the qualitative analysis demonstrated how the element of subjectivity can influence the responses of the junior doctors, especially considering that they are all bound by strong ethical guidelines which should lead to convergent results. Moving forward, the questionnaire and the scores of each instance of the vignettes have been tested against each other through Spearman's correlation analysis, to understand both the direction of the relationship (if it existed) and its statistical significance. In the majority of the cases, the results showed that there was no statistical significance and the null hypothesis H0=Bounded ethicality negatively impacts the quality of decisions was not rejected.

While Chapter 5 has pictured in detail the results of the analysis, Chapter 6 will provide a discussion that will bring together the findings of the current chapter and the knowledge acquired through the literature review, and will be the second-to-last chapter of the dissertation.

Section D: Discussion & Conclusion

CHAPTER 6: DISCUSSION

6.1 Introduction

Chapter 6 describes both the theoretical and practical implications based on the results of the research investigation. It does so by comparing and contrasting the literature review, specifically Chapter 2 which deals with the ethical decision-making process, and Chapter 3 which illustrates bounded ethicality in the healthcare sector related to quality decisions and risks, with the findings reported in Chapter 5.

The discussion is centered around the two research questions of the current study:

RQ1: To what extent do junior medical professionals engage in bounded ethicality?

RQ2: How does bounded ethicality impact quality decisions?

6.2 RQ1: To what extent do junior medical professionals engage in bounded ethicality?

The concept of bounded ethicality has been explained in depth in the two chapters of the literature review and has been said to be strictly related to bounded awareness and in a broader key to bounded rationality. Specifically, bounded ethicality plays a major role in the ethical decision-making process, as it represents the limitations that human beings encounter during the process itself (Chugh et al., 2005). This, together with the element of subjectivity or moral awareness, can cause individuals to be not as ethical as they believe, intend, or desire to be (Tenbrunsel and Smith-Crowe, 2008).

What is particularly interesting in this respect is understanding how well everything mentioned until now in this chapter can and does relate to the qualitative findings.

In more detail, the qualitative analysis of data collected through the vignettes has shown how, once again, the element of subjectivity plays a pivotal role in the ethical decision-making process. Indeed, it affects the individuals' answers, thereby causing a divergence in the overall responses. This is especially reflected in the second scenario presented to the junior doctors, where they are asked to treat a prisoner who is accused of murder for abdominal pain, and who confesses he has killed a person. Based on the information provided, the junior doctors are required to explain whether they would note this on the patient's file and report it to the police, or keep it confidential that he has admitted murder.

The responses given by the professionals involved in the research show not only a degree of bounded ethicality but to a minor extent also bounded awareness, which causes important information to be left out of focus (Chugh and Bazerman, 2017). Specifically, some of the answers provided by the junior doctors demonstrate how the beginning of the question, namely "You are a senior doctor", has not always been considered. For example, Junior Doctor 2 and Junior Doctor 4 replied "Notify the consultant", which given the information of the question should be represented by themselves. This therefore supports the literature related to bounded awareness, which may cause people to fail to detect information that is readily available to them.

However, bounded awareness does not answer the first research question, but it rather does together with evidence of bounded ethicality. Still relative to scenario two of the vignettes, it can be noticed how some doctors feel both the internal and external pressures to report the matter to the police. This unconsciously leads to a wrong decision, which can be caused by the fact that in stressful situations the judgment is very likely to be distorted by emotions (McManus, 2019). To be more precise, in this case, reporting the matter to the authorities would violate patient-doctor confidentiality, as well as break the oath the doctors took at the beginning of their career and fall into a wrong ethical choice. Even though this scenario is very

controversial and represents a real ethical dilemma, the right thing to do would be to not write the confession in the patient's file, not notify the police, and keep it confidential, as it is not relevant to the patient's care. Therefore, the fear of engaging in misconduct and the fear of being involved in a crime by being aware of it can distort the doctor's judgment and induce emotions to predominate.

The analysis of this scenario supports the literature review (e.g. McManus, 2019; Greenwald et al., 2022), as well as the interpretation and understanding of scenario four. Once again, the dilemma is represented by the patient's confidentiality and whether to respect one's wishes or write relevant information in the patient's file. In particular, general failures such as miscommunication (Al-Assaf et al., 2003) are one of the four primary categories of human mistakes in the healthcare sector. The fear of committing a mistake or of omitting fundamental information on the patient's file has prevailed in some of the doctors' answers, who have explained how medical notes are legal documents and there is a duty to report if something relevant comes up while examining a patient. While this is true, patient-doctor confidentiality must be respected, and the best way to deal with this specific scenario is to discuss any relevant result with the patient first, to better understand what the next move will be.

Scenario two and scenario four presented considerable ethical dilemmas that are not easy to overcome, especially because everyone is subject to bounded ethicality. As explicitly mentioned repeatedly in the literature review, bounded ethicality can lead people to engage in morally debatable behavior, which would have otherwise not happened if individuals had not been influenced by pressures of any kind (Chugh et al., 2005).

Contrary to this, scenario one and scenario three and their correct answers were more straightforward, and this is reflected in the responses of the junior doctors. They all agreed that it would be illegal to issue a sick leave certificate in the circumstances provided by the vignette and that the most important thing is the patient's safety which cannot be put in danger in any

way. Once again, this can be associated with the literature, and more specifically to moral awareness which has been explained by Butterfield et al. (2000) as acknowledging that one's potential actions could affect other people's interests or welfare. Although this does not necessarily ensure that an ethical choice will always be performed, Tenbrunsel and Smith-Crowe (2008) have shown that one's moral awareness has a great potential to lead individuals to an ethical decision, rather than an unethical one.

In the first vignette, issuing a certificate would not only be illegal and immoral but would also potentially induce a recurrent behavior of the nurse who could repeatedly ask the doctors for a sick leave certificate. In the first place, this would be unfair to the other doctors who show up at work whenever they are on call and are supposed to be working; in the second place, it would very likely cause problems for the doctor who has issued the certificate the first time, by putting him/her in an unpleasant situation.

In the third vignette, instead, not reporting the colleague could be extremely dangerous for patients and their safety, especially because research has demonstrated that the lack of medical error reporting is one of the major issues in the healthcare sector (Al-Assaf et al., 2003). In this determined scenario, it would be fine to talk to the colleague first to understand what is going on, but the situation could quickly escalate if the doctor is not reported. Therefore, acting ethically would contribute to the prevention and diminishment of human mistakes, thereby slowly creating a safer healthcare system.

6.3 RQ2: How does bounded ethicality impact quality decisions?

The second research question focuses on whether there is a relationship between bounded ethicality and the quality of decisions undertaken by medical professionals and in this case junior doctors. Given that a nonparametric correlation analysis was performed to investigate

the relationship between the items of the questionnaire and the instances of the vignettes, the upcoming discussion will spotlight whether the results show similarities or differences.

Before moving forward, it is important to remember that the proposition that bounded ethicality is not associated with quality decisions was not upheld. Specifically, after having performed Spearman's correlation analysis and having examined the two-tailed significance values, given that the p-value was greater than 0.05 (alpha value) in the majority of cases, the results indicated a negative association between bounded ethicality and quality decisions.

The previous paragraph has explained bounded ethicality and how this is reflected in the reasoning of the participants who were asked to briefly write a note on each vignette in support of the selected score. What still needs to be considered is the concept of quality decisions in the healthcare context, which have been defined by Melnyk and Fineout-Overholt (2019) as those choices made on the best available evidence. Although this has been supported by other scholars (e.g. Sacket et al., 2000), Blumenthal (2004) has stated that further research needs to be conducted to have a valid indicator of quality decisions.

But how can bounded ethicality be associated with quality decisions in the healthcare sector practically?

Given that every decision has a consequence, the conditions under which the choice is made can cloud the judgment. As a result, the decision might be different than if it had been made under other circumstances and may be of higher or lower quality (Chugh et al., 2005). While this happens every day to everyone, its occurrence in the healthcare sector can be extremely dangerous and can depend for example on scenarios such as conflict of interest, limited resources, social pressures, or medical errors. Each one of these cases has been explained in detail in the literature review (e.g. Robertson et al., 2012; Farrell et al., 2020; Sexton et al., 2000); however, some of them are equally represented in the vignettes and can be analyzed from a different perspective.

Let's again consider scenario one, in which a colleague asks one of the junior doctors to issue a sick leave certificate when he/she is not sick. The condition was that, if the doctor did not issue the certificate, the colleague would start acting differently. Given that the junior doctor and the colleague are on good terms, the situation represents a case of personal conflict of interest, in which both issuing and not issuing the certificate would lead to consequences. While in the first case, the consequences would be legal, in the second case the consequences would be unpleasant actions from the colleague. By outweighing the decisions, the former exceeds the latter, but the decision-making process has been influenced by the circumstance under which the decision was made and by the personal conflict of interest (Robertson et al., 2012).

The other example, social pressures, is represented by scenario two. A prisoner, who becomes a patient, has admitted that he has committed murder and it is in the hands of the doctor to decide whether to keep the information confidential or to report it to the police. While in the previous paragraph, it has been explained why the correct decision is to keep the information confidential, this time the scenario can be examined from another point of view, the one in which social pressures prevail. Professionals in this case may feel the need to meet hospital targets, or to commit a moral action by reporting the patient to the police, perhaps leaving out the fact that they are doctors and are bound by patient-doctor confidentiality. Therefore, the intention of behaving ethically leads to a poor-quality decision in which implicit biases influence both the individual's moral conduct and judgment (Greenwald et al., 2022).

Making quality decisions, together with a properly functioning healthcare system, is essential to ensure the well-being and safety of patients, who deserve the best care possible. On the other hand, professionals deserve specific training programs that can support the decision-making process, especially when it is hard to identify an ethical dilemma and make the right choice.

6.4 Summary

The discussion has been focused on the results obtained in Chapter 5 and the knowledge acquired through the literature review in Chapters 2 and 3. With the help of the vignettes, the different scenarios have shown how the ethical decision-making process can be influenced by bounded ethicality and how the latter can in turn influence quality decisions.

Internal and external pressures can push individuals to make a decision that would have otherwise not been made, thereby leading in some instances to poor-quality choices. Not only can this have important consequences in everyday life, but especially in the healthcare sector where lives are at stake.

The next chapter, Chapter 7, is the conclusive one. It will provide a theoretical outlook on the outcomes, together with a thorough explanation of the limitations encountered during this investigation. Furthermore, it will provide some recommendations for future research, to improve the quality of the healthcare sector and the decision-making processes.

CHAPTER 7: CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

7.1 Introduction

This project has explored ethics and the ethical decision-making process in the workplace, specifically in the healthcare sector. It evaluated the tendency and propensity of junior medical professionals to be caught up in bounded ethicality and its potential impact on quality decisions. This was assessed by using a mixed methodology, presenting participants with vignettes and a questionnaire on quality decision-making. The current chapter will provide a broader theoretical outlook of the results obtained, along with the limitations of the investigation and recommendations for future research.

7.2 Theoretical Outlook and Outcomes

The interpretation of the results obtained throughout this research project can be related to the asymmetric, dynamical, and cyclical model of bounded ethicality introduced by Chugh and Kern (2016) to further understand the psychological processes that lead to ethical decision-making. The model, explained in Section 2.5 of the dissertation, illustrates how different decisions undertaken by the same individual can be based on the circumstances.

In particular, moral behavior depends on one's self-threat assessment, which is a cognitive process during which individuals evaluate whether a situation or an event may represent a potential threat to themselves (Chugh and Kern, 2016). This further establishes whether self-enhancement or self-protection will be employed by the person during the decision-making process, thereby causing a choice to be ethical or unethical. By taking into account the results of this investigation and the related discussion, it can be noticed how this "2.0" model has been applied, even though unconsciously, by the junior doctors during their decision-making process. Specifically, ethical dilemmas may pose a threat to individuals, who find themselves

in a situation of uncertainty where, depending on the circumstances, self-enhancement or self-protection might prevail. While self-enhancement indicates a lower self-threat, self-protection corresponds with a greater self-threat (Alicke and Sedikides, 2009; Sedikides, 2012). Given that the considered model is dynamic, every action undertaken by an individual is the consequence of the previous decision and will be the consequence of the next choice. The only factor that can slightly influence the sensitivity of an individual towards ethical self-threats is moral awareness, which has emerged throughout the discussion.

By merging the theoretical and practical implications related to bounded ethicality, the research findings have shown how a higher level of self-threat may cause individuals to engage in self-protection and as a consequence, even though unconsciously, in bounded ethicality (Scenario 2 and Scenario 4). On the other hand, a lower level of self-threat encourages individuals to understand the ethicality of their choices more clearly (Scenario 1 and Scenario 3).

7.3 Limitations

Every research project has its limitations, and to give readers a clear picture of the study's scope and possible directions for improvement, it is essential to openly acknowledge them. The major issue was represented by the limited sample of participants which were six junior doctors. Instead, the initial plan was to assess the decision-making process differences between twenty-five junior doctors and twenty-five senior doctors, to identify whether or not they are ethically bound. Furthermore, given the sensitivity of the topic, not all the participants were willing to share the way they would act in the presented scenarios. Therefore, out of the eight junior doctors who had provided the researcher with the filled-in data collection tool, only six presented valid results whereas two were invalid.

In addition, another limitation was represented by the possibility of the involved professionals not being fully honest when providing an answer to the vignettes or the questionnaire, due to a

variety of reasons such as confusion or fear of being exposed. This issue was addressed by ensuring anonymity at all stages of the research and, since the participants could have provided different answers entirely based on their interpretation and understanding of the questions, this element of subjectivity was slightly reduced by clearly depicting each scenario. However, as the results have shown, the element of subjectivity has in some cases prevailed.

Besides the above-explained limitations related to the study itself, what needs to be considered are the potential limitations of one of the employed tools, namely the vignettes. In the methodology chapter (Chapter 4), the primary strengths of the vignettes have been identified and have supported the choice of this tool for this research and the data collection. However, the degree to which a written stimulus, and participants' responses to it, may faithfully replicate some features of what happens in the "real world," is a critical factor, inherent to all vignette research (Evans et al., 2015)

This, together with the fact that there are different procedures for developing vignettes depending on the study, may result in a biased response when the scenario highlights some issues while downplaying others (Matza et al., 2021).

7.4 Recommendations for Future Research

The healthcare sector has been largely studied by scholars all over the world, who have identified its strengths and weaknesses concerning different aspects (e.g. end-of-life care decisions, resource allocation during crises such as COVID-19, ethics of technology, and robots). However, the topic of bounded ethicality has not always been considered thoroughly in this industry, but rather only for some issues that are already relevant. But there is much more that needs to be discovered, especially for example when it comes to the role of ethics in healthcare in different countries.

A recommendation would be to introduce bounded ethicality as a critical and essential component of the educational curriculum in healthcare. The reason behind this statement is that the financial expenses associated with this subject matter are substantial, as well as the pronounced number of medical mistakes happening nowadays. The topic should therefore be given more importance and attention for both practical and financial reasons.

Additionally, cross-country comparisons could be conducted by selecting two or more nations that are similar, and at the same time, different in healthcare. An idea could be to determine the best practices that lead to ethical decision-making and quality decisions in each country and compare and contrast them with each other. The aim is to understand whether it is possible to create a framework, or perhaps even a standard questionnaire, which can be adopted by more countries rather than only one to understand how bounded ethicality can be further reduced in healthcare.

Furthermore, the investigation conducted by the researcher could be performed as it was initially supposed to be done, namely by analyzing the difference between junior and senior doctors. This would contribute to a better understanding of the association between bounded ethicality and quality decisions, and above all would allow us to comprehend if and how professional experience can lead to different outcomes. By doing so, ethical dilemmas would be examined by two categories of doctors, who would both have the chance to share how they would act in a determined situation. It would be truly interesting to understand the reasoning behind the scores selected both by the junior and the senior doctors and to compare them to review whether they are aligned or rather divergent.

Finally, even though studies have already been conducted concerning cognitive biases and ethics in healthcare, a better understanding of these variables can contribute to the development of useful support tools that might weaken their effect on the decision-making process.

7.5 Conclusion

This investigation has shown that even though professionals are generally trained to deal with certain cases in the same way, more ethical guidelines and theoretical frameworks are necessary in the healthcare sector to prevent the element of subjectivity from prevailing during the decision-making process. The creation of such schemes can not only improve the decision-making process as such but also contribute to a better prioritization of patient's well-being. At the same time, this can significantly reduce human error in healthcare, as well as the lack of reporting human mistakes to the authorities because of fear of being punished (Al-Assaf et al., 2003).

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APPENDICES

APPENDIX 1: VIGNETTES

FIRST SCENARIO: A colleague (nurse) comes to tell you that the day before he took the day off because he wanted to watch a football match. Now, he is asking you to issue a sick leave certificate. You need to work with this nurse on a daily basis, you are on good terms and you know that if you don't issue the certificate he will start acting differently (e. g. calling you in the middle of the night, creating unnecessary problems).

Would you issue the certificate?

⬭ Strongly disagree ⬭ Disagree ⬭ Neither agree nor disagree ⬭ Agree ⬭ Strongly agree

Briefly state why

_____

_____

_____

_____

_____

SECOND SCENARIO: A prisoner who is accused of murder, but still awaiting trial, is admitted to the hospital for abdominal pain. Over the next few days, you develop a friendly relationship with the patient and he tells you that he actually killed a person.

You are a senior doctor; would you note this on the patient's file and notify the police about it?

⬭ Strongly disagree ⬭ Disagree ⬭ Neither agree nor disagree ⬭ Agree ⬭ Strongly agree

Or would you keep it confidential that he has admitted murder?

⬭ Strongly disagree ⬭ Disagree ⬭ Neither agree nor disagree ⬭ Agree ⬭ Strongly agree

Briefly state why

_____

_____

_____

_____

_____

THIRD SCENARIO: After the weekend, a colleague comes to work in a hangover from alcohol and you are aware that he/she abuses mild drugs such as ecstasy. You notice that during these days of hangover, he/she is more likely to omit doing urgent things, and sometimes commits mistakes.

Would you report this to your consultant?

⬭ Strongly disagree ⬭ Disagree ⬭ Neither agree nor disagree ⬭ Agree ⬭ Strongly agree

Or would you ignore it because it is not your problem?

⬭ Strongly disagree ⬭ Disagree ⬭ Neither agree nor disagree ⬭ Agree ⬭ Strongly agree

Briefly state why

_____

_____

_____

_____

_____

FOURTH SCENARIO: You are seeing a patient and you need to ask him some sexually related questions. The patient says that he can answer you as long as you do not make any notes in the file and you keep it confidential, knowing that the file can be read by insurance companies and other doctors in the future. He additionally says that his wife works in the hospital and she has access to his file.

Would you accept this proposal?

⬭ Strongly disagree ⬭ Disagree ⬭ Neither agree nor disagree ⬭ Agree ⬭ Strongly agree

And if you find something significant, would you keep your promise to not write it down on the file?

⬭ Strongly disagree ⬭ Disagree ⬭ Neither agree nor disagree ⬭ Agree ⬭ Strongly agree

Briefly state why

_____

_____

_____

_____

_____

APPENDIX 2: STANDARD QUESTIONNAIRE FOR QUALITY DECISIONS

Individual level

Read the following items and rate the extent to which each aspect describes yourself. Please be as honest and truthful as possible. The source of this data is anonymous and confidential:

1. My decision-making is knowledge-based

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

2. My decision-making is consistent

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

3. I consider uncertainty and unknowns in my decision-making approach

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

4. I generate SWOT analyses in my decision-making

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

5. I present contingencies or achievable options as part of my decision-making

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

6. My decision-making is transparent

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

7. I understand the context of the decision I am being asked to make

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

8. I understand the importance of the decisions I make

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

9. I use a structured approach in my decision-making

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

10. I qualify the probability of success in my decision-making

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

11. I quantify the probability of success in my decision-making

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

12. I receive constant training in the science of decision-making

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

13. I use intuition or 'gut feeling' in my decision-making

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

14. My professional experience is important when having to make challenging decisions

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

15. I can get emotional with my decision-making

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

16. I have experienced "paralysis by analysis" caused by my slow decision-making

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

17. I have experienced a negative outcome by a decision not being made

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

18. I do tend to make the same mistakes as in the past

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

19. Recent or dramatic events greatly impact my decision-making

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

20. My procrastination has at times unfortunately resulted in a negative outcome

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

21. My decision-making could be improved by assigning weights

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

22. I underestimate problems which adversely impact my decision-making

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

23. I procrastinate on projects which should have been terminated at an earlier stage

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

24. I feel I could make better quality decisions

Not at all	Sometimes	Frequently	Often	Always
☐	☐	☐	☐	☐

25. For how many years have you been practicing medicine?

26. What is your gender?

APPENDIX 3: INFORMATION LETTER

Dear Sir/Madam,

My name is Margherita Mancini and I am a student at the University of Malta, presently reading for a Master of Science in Strategic Management and Digital Marketing. I am presently conducting a research study for my dissertation titled "Associating bounded ethicality and quality decisions amongst medical professionals"; this is being supervised by Professor Pierre Mallia and Professor Vincent Cassar.
This letter is an invitation to participate in this study. Below you will find information about the study and about what your involvement would entail, should you decide to take part.

The aim of my study is to evaluate the tendency of medical professionals to be caught up in bounded ethicality and to assess whether this impacts quality decisions. Your participation in this study would help contribute to a better understanding of the association between bounded ethicality and quality decisions in the healthcare sector. Any data collected from this research will be used solely for purposes of this study.

Should you choose to participate, you will be asked to read thoughtfully four short fictitional scenarios related to the healthcare sector. You will then be asked to answer some questions by providing a score on a Likert-type scale ranging from strongly agree to strongly disagree. Furthermore, you will be asked to briefly provide an explanation of the reasoning behind the selected score for each case scenario.
Finally, you will be asked to fill in a brief standard questionnaire regarding quality decisions.

The completion of the vignettes and the questionnaire will take approximately 20 minutes, and it is to be conducted in a time and place convenient for the participant, within 15 days from the receival.
Data collected will be always anonymous and will never be shared with third parties. They will be treated confidentially and will be used for the exclusive purpose of the investigation.

Participation in this study is entirely voluntary; in other words, you are free to accept or refuse to participate, without needing to give a reason. You are also free to withdraw from the study at any time, without needing to provide any explanation and without any negative repercussions

for you. Should you choose to withdraw, any data collected from your answers will be erased as long as this is technically possible (for example, before it is anonymised or published), unless the erasure of data would render it impossible or seriously impair the achievement of the research objectives, in which case it shall be retained in an anonymised form.
If you choose to participate, please note that there are no direct benefits to you. Your participation does not entail any known or anticipated risk and will not in any way cause harm.

Please note also that, as a participant, you have the right under the General Data Protection Regulation (GDPR) and national legislation to access, rectify, and where applicable ask for the data concerning you to be erased. All data collected will be stored in anonymised form on completion of the study.
A copy of this information sheet is being provided for you to keep and for future reference.

Thank you for your time and consideration. Should you have any questions or concerns, please do not hesitate to contact me by e-mail at **margherita.mancini.22@um.edu.mt**.

You can also contact my supervisor over the phone:
Professor Pierre Mallia: +356 2340 1124
Professor Vincent Cassar: +356 2340 3479

Or via email:
pierre.mallia@um.edu.mt
vincent.cassar@um.edu.mt

Sincerely,

Margherita Mancini **margherita.mancini.22@um.edu.mt**

APPENDIX 4: CONSENT FORM

"Associating bounded ethicality and quality decisions amongst medical professionals"

I, the undersigned, give my consent to take part in the study conducted by Margherita Mancini. This consent form specifies the terms of my participation in this research study.

1. I have been given written and/or verbal information about the purpose of the study; I have had the opportunity to ask questions and any questions that I had were answered fully and to my satisfaction.
2. I also understand that I am free to accept to participate or to refuse or stop participation at any time without giving any reason and without any penalty. Should I choose to participate, I may choose to decline to answer any questions asked. In the event that I choose to withdraw from the study, any data collected from me will be erased as long as this is technically possible (for example, before it is anonymised or published) unless the erasure of data would render it impossible or seriously impair the achievement of the research objectives, in which case it shall be retained in an anonymised form.
3. I understand that I have been invited to participate in a study in which the researcher will ask me to read four fictitional scenarios related to the healthcare sector, provide an answer to them, and fill in a brief standard questionnaire regarding quality decisions, in order to evaluate the tendency of medical professionals to be caught up in bounded ethicality and to assess whether this impacts quality decisions. I am aware that the completion of the vignettes and the questionnaire will take approximately 20 minutes. I understand that the completion of the vignettes and the questionnaire is to be conducted in a place and at a time that is convenient for me, within 15 days from the receival.
4. I understand that my participation does not entail any known or anticipated risks.
5. I understand that there are no direct benefits to me from participating in this study. I also understand that this research may benefit others by enhancing the understanding of the association between bounded ethicality and quality decisions in the healthcare sector.
6. I understand that, under the General Data Protection Regulation (GDPR) and national legislation, I have the right to access, rectify, and where applicable, ask for the data concerning me to be erased.
7. I understand that all data collected will be stored in an anonymised form on completion of the study and following the publication of results.

8. I have been provided with a copy of the information letter and understand that I will also be given a copy of this consent form.
9. I am aware that my identity and personal information will not be revealed in any publications, reports, or presentations arising from this research.

I have read and understood the above statements and agree to participate in this study.

Name of participant: _____

Signature: _____

Date: _____

_____

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