UNIVERSITÀ DEGLI STUDI DI MESSINA

DIPARTIMENTO DI SCIENZE COGNITIVE, PSICOLOGICHE,

PEDAGOGICHE E DEGLI STUDI CULTURALI

DOTTORATO IN SCIENZE COGNITIVE, XXXIII CICLO

THE MORAL REASONING AND THE ROLE OF EMOTIONS IN THE DECISION-MAKING PROCESS. A PILOT RESEARCH WITH CLINICAL ETHICS CONSULTANTS.

Dottorando:
Margherita Dahò

Coordinatore del dottorato:
Prof.ssa Alessandra Falzone

Tutor e Supervisore di Tesi:
Prof.ssa Amelia Gangemi

S.S.D: M-PSI/01

Anno Accademico 2019/2020

TABLE OF CONTENTS

❖ *Introduction*

Since the early 2000s, Greene and his collaborators (2001; 2005; 2008) analyzed the moral reasoning, with also the support of neuroimaging techniques, in order to test the hypothesis that the deontological and utilitarian approaches are guided by two distinct and independent processes. They concluded that deontological judgments (e.g. disapproving of killing one person to save several others) are driven by automatic emotional responses, while utilitarian judgments (e.g. approving of killing one to save several others) are led by controlled slow cognitive processes based on the cost-benefits analysis. Despite other evidence seems to agree with Greene's dual-process model (e.g. Moore et al., 2008; Suter and Hertwig, 2001; Zhang et al., 2017b), moral dilemma research cannot determine whether the obtained effects reflect differences in the strength of a single moral inclination, or in the joint operation of two distinct predispositions (Conway and Gawronski, 2013). In any case, literature agrees that emotions have an influence on moral reasoning and the decision-making process.

During a previous doctoral work experience at the Children's Hospital and Clinics of Minnesota in the U.S.A., I discovered the role of the Clinical Ethics Consultant. Their purpose is to assist healthcare providers in patient care, facilitating the ethical decision-making of doctors and hospital policymakers, and improve patient welfare. Clinical ethics committees have been established in many institutions in numerous countries during the last decades (McGee et al. 2001; Glasa, 2002; Slowther et al., 2004; Fox et al., 2007; Hajibabaee et al., 2016) and are critical in assisting physicians in resolving conflicts through an attentive mediation that is mindful of the interests, rights, and responsibilities of all those involved (Fletcher and Siegler, 1996). In many countries, especially in the U.S.A., the opinion of ethics consultants has significant weight in deciding the next course of medical care, and in turn, plays a role in determining patient outcomes. Thus, given that clinical ethics consultation services are now

worldwide and play a fundamental role in final medical decisions in case of ethical conflicts, it is important to understand how the cognitive and emotional processes are utilized by consultants during the moral reasoning and decision-making process.

Therefore, for this Ph.D. research project, after analyzing in-depth the literature regarding this topic, emotions and reactions of clinical ethics consultants (CECs) during and after case deliberation have been explored with the use of a semistructured interview. Later, a pilot experiment composed of a survey of six moral dilemmas and a self-report questionnaire that measure both positive and negative emotions was sent to participants. The aim was to investigate whether the emotions and feelings influenced the election of a deontological or utilitarian answer. Finally, data were discussed, with a proposal to improve the training of next generations of CECs that consider the role of emotions.

❖ *Chapter I*

➢ *What are Ethics and Bioethics? A Brief Clarification*

Ethics is a generic term covering many different ways of understanding and examining the moral life, yet some authors use interchangeably the terms "ethics" and "morals" (Singer, 1993; Banks and Gallagher, 2009). Hawley (2007), for example, describes ethics as the study of moral behavior – what is good or bad, right or wrong – in contrast to Seedhouse (1998) who refers, instead, to moral reasoning and ethical action. Other academics propose that ethical action is supported by moral values (Tong, 1997; Johnstone, 1999; Thompson and Dowding, 2002; Fry and Johnstone, 2002). The differences arise due to the distinctive approaches used in ethics: normative and non-normative. Ethical normative theories attempt to identify and justify norms, which are often referred to as principles. There are two types of non-normative ethics: a descriptive one, and a meta-ethics one. The first one refers to the investigation of moral beliefs and conducts, that is, how individuals reason and act. The meta-ethics involves instead the analysis of language, concepts, and methods of reasoning used in normative ethics. It is also concerned with moral epistemology, the logic and patterns of moral reasoning, justification and nature of moral truth (Beauchamp and Childress, 2013).

Bioethics (or clinical/medical ethics), instead, has been defined as a system of moral principles that applies values to the practice of clinical medicine and in scientific research. It is also based on a set of values that professionals can refer to in the case of any moral confusion or conflict. In fact, the broader term "bioethics" incorporates several theories about morally right and wrong decisions and actions in healthcare –as well as in the life sciences- independent of healthcare organizations. For this reason, a "clinical/medical or healthcare ethicist" can be considered one type of "bioethicist" who solves

normative problems and questions related to health, but not all "bioethicists" are healthcare ethicists.

- ***The Birth of Bioethics: differences in the American and European moral principles***

In the book entitled *The Birth of Bioethics* (Jonsen, 1998) the author asserts that bioethics was raised principally in the United States and it is a typical product of American culture. However, this opinion was criticized by Gracia (2001) who underlines, on the other hand, the importance of the role of the secularization of Western culture and of the emancipation in the decision-making process concerning life and death. According to Gracia, "ethics", until a few years ago, was considered as the philosophical background of morality and moral thought. Only during the '60s the meaning of this word changed to include the field of normative ethics. This revolution happened in The United States but also in Europe. Gracia concludes by saying that bioethics was born and developed especially after the appearance of the civil rights movements at the end of the Second World War, and thanks to the flourishing growth of biotechnologies and medical science. As reported by Callahan (1994), bioethics is always communitarian or cultural because the decisions reflect not only the responsibility of the individual but also the social dimension of the moral life.

Thus, culture always models individuals' personal choices. For this reason, it is hard to find a standard definition of bioethics, given that every community has a different idea of what is "ethical" or "moral" based on its cultural, social and religious background. For example, several studies indicate that there exist important differences in physicians' and nurses' perceptions of ethical dilemmas in practice, and, as a consequence of that, such variances may become the cause of conflicts (McLure, 1991; Rodney, 1998; Oberle and Hughes, 2000). If such differences occur despite the similitudes (e.g. same living area, work setting, and field of practice), it is possible to imagine how much wider can

be the differences among people that live in far divergent countries. Ten-Have maintains that the Western world embraces at least three separated ethical traditions: the Anglo-Saxon, the Central European, and the Mediterranean area. The regions, indeed, made their personal “ethics” instead of “translating” or “adopting” the American tradition (Gracia, 1993; Privitera, 1996). In particular, the European culture has been strongly influenced by the birth and growth of Christianity (divided anyway into divergent perspectives that are: Catholicism, Protestantism, and the Greek-Orthodox Church); the explosion of the French revolution and the Worlds Wars; the rise of philosophical Enlightenment ideas, Humanism and by the scientific and technological progress. Furthermore, ethics in the Eastern European countries have been influenced by the Marxist-Leninist ideas. For these reasons, the EU’s generally proposed values are: liberty, tolerance, equal opportunities, social justice, human dignity, and subsidiarity. Ten-Have thus affirms that the philosophical perspective seems to be larger in Europe than in the United States (Weile and Ten-Have, 1992). According to him and Weile, in Europe, the bioethical discussion is enriched by many philosophical approaches which all contribute valid insights. He argues also that the Anglo-American ethical tradition is more teleological and consequentialist, while the European is more deontological, even though it is, in some countries, under the influence of philosophical and theological traditions (Weile and Ten Have, 1992).

Salvino Leone, instead, following the thought of Elio Sgreccia, analyzed in deep the Mediterranean ethics (Leone, 1990). He affirms that the countries of this area created a "*realistic*" and "*personalist*" model of biomedical ethics, based on classical Aristotelian-Scholastic philosophy and complemented with more modern European philosophical traditions such as phenomenology, axiology, and hermeneutics. Therefore, as reported by Leone, this model of bioethics is founded on four fundamental life values: liberty, responsibility, therapeutic wholeness, and social subsidiarity (for instance, the main idea is that smaller units are always preferred to larger ones when it comes to addressing social problems). Furthermore, he reports that trustworthiness for patients of this

region (that is a satisfactory and loyal relationship with the physician, whom they often see as a friend or a guide) is considered a more important factor than receiving detailed information on their medical status or declaring their right of autonomy.

The Enlightenment period, instead, played an important role in shaping the central European ethical tradition with "rights and duties" as its main concept (MacIntyre, 1984). In particular, the ethics of virtue persevered in those countries in which the Enlightenment had less influence, such as the Catholic and Orthodox Southern European countries, while the ethics of duty prevailed in the Protestant Central European regions. In the Anglo-American perspective, in addition, bioethics, as described by Beauchamp and Childress (2013), involves the application of four different principles: autonomy, beneficence, non-maleficence, and justice. In their volume, they demonstrate how these prima facie principles can be expanded to apply to various conflicts and dilemmas. From this point of view, bioethics can thus be considered as "*the framing of problems and solutions by a relatively small set of concepts: rights, duties, obligations, competence, and justice*" (Gustafson, 1990, p. 127).

The report on the BIO-MED II project (1998; 1998b) called "*Basic principles in Bioethics and Biolegislature*", which was written with the collaboration of 22 partners, presents an analysis of the prevailing ethical principles in Europe. The idea of this investigation into European bioethics is to show the limits of an approach to bioethics based exclusively on the concept of autonomy, which has largely influenced American bioethics (Wulff, 1994). Respect for patient autonomy has been widely recognized in the countries of North America and, in a sense, also in Europe. Yet, this acceptance tends to consider autonomy as the only guiding principle concerning the protection of the human person. Consequently, it ignores the other dimensions of the protection of human beings. The researchers participating in this project argue that people must also take into account other supplementary principles when it comes to personal autonomy and the protection of human beings in bioethics (BIO-MED II, 1998; 1998b; Rendtorff, 2002). In contrast to the idea of

Beauchamp and Childress, the new European bioethics takes dignity, integrity, and vulnerability as its guiding values. The principles in the structure of subsidiarity, responsibility, and justice have also been integrated. In conclusion, for the BIO-MED II project, it is essential to provide a more secure foundation for the protection of the human person in bioethics. Dignity, for example, cannot be reduced to autonomy as it refers to the inviolability of human being life. It means that every human being must be regarded as being priceless. For this reason, dignity is defined both as an intrinsic value and as a matter of constructive morality in human relationships (BIO-MED II, 1998; Rendtorff, 2002). Another factor in contrast with the Anglo-American ethics is that the latter lacks the typically European community dimension[1] (Gracia, 1993; Callahan, 1994). An objective of EU policy is to create a health system that ensures the best health care and move the responsibility as close as possible to the individual citizen. In Europe, the principle of solidarity and the right to equal access to medical care also prevails (Gracia, 1993; Rendtorff, 2002).

➢ *Moral Dilemmas and Social Norms*

In the book "*Principles of Biomedical Ethics*", the authors state that moral dilemmas are *"circumstances in which moral obligations demand or appear to demand that a person adopt each of two (or more) alternative but incompatible actions, such that a person cannot perform all the required actions"* (Beauchamp and Childress, 2013, p. 11). Thus, the only way to observe one obligation is by contrasting or overriding another one. An example is given by the "Trolley Problem" (Foot, 1967), a dilemma invented to oblige people to make a hard extreme decision, given that the choice determines the death of one or more individuals. The well-known form of the problem was first introduced by Philippa Foot in 1967 but was also later adapted by Judith Thomson (1976;

[1] Although in many northern European states it has equally given great importance more to liberalism and personal autonomy than to the common good.

1985), Frances Kamm (1989), and Peter Unger (1996). Here is the Thomson's version:

"*You see a runaway trolley moving toward five tied-up (or otherwise incapacitated) people lying on the tracks. You are standing next to a lever that controls a switch. If you pull the lever, the trolley will be redirected onto a side track, and the five people on the main track will be saved. However, there is a single person lying on the sidetrack. You have two options: do nothing and allow the trolley to kill the five people on the main track or pull the lever, diverting the trolley onto the side track where it will kill one person*". (Thomson, 1985)

Many other similar versions of this problem have been reported. For example, the famous "Footbridge dilemma", also called informally "the dilemma of the fat man".

"*A trolley is hurtling down a track towards five people. You are on a bridge under which it will pass, and you can stop it by putting something very heavy in front of it. As it happens, there is a very fat man next to you – your only way to stop the trolley is to push him over the bridge and onto the track, killing him to save five. Should you proceed?*" (Greene et al., 2001)

Most of the studies on moral judgments have focused above all on situations in which negative actions must be evaluated, actions which involve a violation of a moral norm (e.g. Greene et al., 2004; 2009; Borg et al., 2006; Hauser et al., 2007; Cushman et al., 2006; 2011; Conway and Gawronski, 2013). The main purpose of these investigations is to bring to light whether or not it is right to actively inhibit the utility of an individual to produce a greater utility for the society or the highest number of people involved. Most of the subjects interviewed affirm that they would pull the switch to save a net of four lives, but would not push the fat man. In the first case, one does not intend harm towards anyone – harming one subject is just a side effect of switching the trolley away

from the five. However, in the second case, harming the fat man is done intentionally, so it would be like if one were killing him. In any case, moral psychology does not include only assessments or judgments regarding situations with negative outcomes, but also positive evaluations (e.g. situations of cooperation and altruism). These have, however, received less attention from researchers (e.g. De Quervain et al., 2004; Rilling et al., 2002; 2007).

The Trolley and the Footbridge dilemmas have been invented and look like novels, yet Clinical Ethics Consultants, as well as rescue and emergency teams, have to deal with this kind of situations every day. For example, in the case of rescue at sea because of a sunken or damaged ship, who should be saved first among the survivors in the water? It is believed that women and children should come first, yet someone else may think that is better to save the first drowning individuals met in the water in order to save more lives, instead of one single woman or child who is much farther away. (In this particular situation, common in the Mediterranean Sea, there is no time to reflect or make a shared decision. Thus, it is for the single rescue diver to decide who to save first). This example of dilemma seems to be extreme and very far from common daily life, but actually, newspapers and news media often present stories about moral conflicts or dilemmas in areas of great public interest (e.g. Terri Schiavo or Charlie Gaard cases). There are, finally, several cases of mothers dealing with the hard choice to carry on a pregnancy or not, or even to save their life or the life of their fetus (when there are, for example, important medical complications).

In most cases, social norms or laws guide the decision-making process. A norm can be formal or informal, personal or collective, descriptive of what most people do such as fashion and fads, or prescriptive of behaviors. According to Bicchieri (2005), social norms have a central and regular influence on human behavior and they are public and shared. However, unlike legal rules, which are supported by formal sanctions, social norms may not be enforced at all. Furthermore, they often go against narrow self-interest. It is believed that what usually guides people to make a decision is the so-called "*common morality*" (Beauchamp and Childress, 2013), a set of universal norms or mandatory rules

applicable to all individuals. Some of them are, for instance, *"do not kill"*, *"do not cause pain"*, or *"do not steal"*. The common morality contains, moreover, standards other than rules, which are called "*moral character traits"* or universal virtues, such as honesty, kindness, and lovingness (the opposite of these virtues are the *vices,* which are universally recognized as moral defects). In biomedical ethics, the main moral norms, which guide medical staff and ethics consultants, also derive from universal morality.

As already explained, ethics are propositional statements that are used to determine what the right course of action in a situation is -although it is often hard and maybe even utopist to establish what is right or not. Some authors think that individuals rely only on logical and rational criteria to reach a decision (Congress, 1999; Dolgoff et al., 2009; Reamer, 1995; Robison and Reeser, 2002). Other researchers think instead that deontological judgments (e.g. disapproving of killing one person to save several others) are driven by automatic emotional responses, while characteristically utilitarian judgments (e.g. approving of killing one to save several others) are driven by controlled cognitive processes[2] [3] (Greene et al., 2008). Therefore, in light of the ongoing development and implementation of clinical ethics committees during the last decades, it is important to understand how bioethics knowledge and the cognitive and emotional processes are utilized by ethics consultants during the decision making process.

There are just a few previous studies present in the literature on the moral reasoning of clinical ethics consultants (Self and Skeel, 1991; 1998; Dobrin, 2003; Racine, 2008) and only a couple that reports about their experience of decision-making (Pedersen et al., 2009a; 2009b). Yet, they do not answer questions such as: what happens in consultants' minds when they take, for example, an end-of-life decision? Do they experience regret or fear? Finally, what leads the reasoning of consultants in cases of the absence of specific formal rules/policies or social norms? Do emotions push them, in such

[2] Moral reasoning will be explained deeper in the second chapter.

[3] Also the moral preferences or inclinations have been analyzed by using vignettes, stories, and dilemmas (see for a review Bartels and Pizarro, 2011; Djeriouat and Trémolière, 2014; Lee and Gino, 2015; or see Christensen and Gomila, 2012;).

particular cases, to take one decision instead of another? In general, individuals are motivated to follow a norm to avoid negative sanctions. Indeed, according to Bicchieri (2005), people may wish also to please others by doing something others expect. Another reason for complying with a norm or not is that one accepts others' normative expectations as well-founded. Therefore, consultants could reach a "wrong" conclusion because of many reasons, such as: heuristic reasoning, desire to please another's expectations, biased representations of the circumstances, or an oversimplification, which fails to consider all perspectives. Moreover, the moral principles and social norms differ based on the cultural area, and because of that, the behavior or final decision may change, especially when a norm is susceptible to various interpretations (Bicchieri, 2016). For instance, in cases where a patient is in a vegetative coma, the family members can ask to withdraw the life-support in one country, while in another one they are not able to do so because it would be considered a homicide. Thus, the same laws and common norms do not apply to all clinical cases and circumstances. Finally, the conflict between two moral principles seems to be stronger in the presence of a new or unusual situation because the individual has to decide without the support of social norms or specific recommendations. An example is if a complex surgery can be done on a patient affected by a unique congenital condition not yet well investigated. In this case, the clinical ethics committees, or the single consultant, may have to start from personal beliefs to reach a decision and conflicting emotions may lead the process.

- ***The Development, Nature, and Goals of Clinical Ethics Consultation***

Healthcare organizations typically offer ethics committees and resources that include education, research, policy development, and consultation. Clinical ethics committees have been established in many institutions in numerous countries during the last decades (McGee et al. 2001; Glasa, 2002; Slowther et

al., 2004; Fox et al., 2007; Hajibabaee et al., 2016). One of the earliest suggestions for the development of hospital-based ethics committees was the *Medico-Moral Guide* of the Canadian bishops (1971). The preamble of this model recommends establishing medical-moral committees in every Catholic hospital. Later, in 1975, in the very first issue of the *Journal of Medical Ethics*, May (1975) elaborated a statement on the need of including hospital ethics committees, describing their composition and functions. However, it was only in 1976 that the first formal clinical case was reported. In this circumstance, the New Jersey Supreme Court recommended using an "ethics committee" to confirm the prognosis of a comatose woman, Karen Ann Quinlan, whose family requested termination for her life support (Fleetwood, Arnold, Baron, 1989). Later, several other court cases referred to the firsts clinical ethics consultants (CECs) and the role that they might play in healthcare delivery. While subsequent cases were concentrated on ethical issues rather than validating medical prognoses, this was the first case in the United States in which the court suggested establishing a committee to reach a final medical decision in what previously always had been the private authority of physicians and patients.

Another turning point was in 1983 when the President's Commission for the S*tudy of Ethical Problems in Medicine and Biomedical and Behavioral Research* recommended the use of ethics committees as part of the institutional review system, especially in cases involving a non-treatment decision, and to develop mechanisms for review and consultation in cases raising ethical issues. Specifically, the commission suggested ethics committees as a mechanism for resolving conflicts. The American Academy of Pediatric later recommended the establishment of infant care review committees in response to the non-treatment of a 21 trisomy syndrome baby in Indiana (Pence, 1990). Thus, since the day of the Quinlan case, institutional ethics committees have been a growing American and international phenomenon. While in 1982 only 1% of American hospitals had such committees, by 1987, that figure had reached 60% (Younger, Jackson, et al., 1983; AHA, 1985). A variety of influential medical groups, including the *American Medical Association*, the *American Hospital Association*,

the *American Academy of Pediatrics*, and the *American Academy of Neurologists* have endorsed CECs to play an increasing role in medical settings.

CECs increased also in Europe as number and importance during the last decades (Glasa, 2002; Slowther et al., 2004; Steinkamp et al., 2007; Hajibabaee et al., 2016), even though they appeared only around 20 years later than in the United States. For example, all major hospitals in Norway have been required to have an ethics committee since 1996, and in Belgium, a law from 1994 obliged all general and psychiatric hospitals to develop a local ethics committee (Hajibabaee et al., 2016). Investigations on or evaluations of CECs have, however, started to appear in the European literature only recently (Reiter-Theil, 2001; 2003; Reiter-Theil and Agich, 2008; Aleksandrova, 2008; Førde et al., 2008; Hurst et al., 2008). A review of these studies reveals that CECs members in Europe are different in their tasks and duties. For example, Great Britain focused on a national strategy to establish CECs on a large scale, with a primary emphasis on educational issues and policy development, rather than on case consultation (Slowther et al., 2004), while in France medical centers normally do not have CECs or anything similar, except in a few rare organizations (Fournier and Pousset, 2006; Hajibabaee et al., 2016).

In Italy, the situation is even more different. Indeed, only in 2006 the Italian Ministerial Decree the latest regulation concerning the work of ethics committees in which it states that CECs may also offer consultation about ethical issues concerning scientific and healthcare activities, to protect and promote human values. Furthermore, they may propose training initiatives for health care professionals in the field of bioethics. Before this legislation, the role of CECs was focused only on the evaluation of the relevance and methodological accuracy of research protocols, to ensure the safety and wellbeing of subjects enrolled in experiments, in accordance with the principles of the declaration of Helsinki. In the Italian setting, it is worth noting the crucial work conducted by the GIBCE (Interdisciplinary Group of Clinical Bioethics and Ethical Consultancy in the health sector) a non-profit association, which aims to promote and develop Clinical Bioethics and Ethical Consultancy in the health sector in all its

forms, including Health Technology Assessment (HTA) and applied Bioethics (for a review: Pegoraro, Picozzi, Spagnolo, 2016)

However, the various forms of CECs both in Europe and in the U.S.A. have now the predominantly common goal to assist the healthcare workers in improving patient experiences of the quality of care received. Thus, they aim to facilitate not only the ethical decision-making of doctors and hospital policymakers but also to improve patient welfare. This general purpose can be achieved if consultation helps to: 1) identify and analyze the nature of the conflict that motivates the action of CEC; 2) facilitate the resolution of conflicts through an attentive mediation that takes care of the interests, rights, and responsibilities of all those involved (Fletcher and Siegler, 1996). Another service is related to promote practices consistent with ethical norms and standards, namely, informing institutional efforts and policy developments and the appropriate utilization of resources. Finally, the commissions should provide education in healthcare ethics (ASBH, 2011) by suggesting options that may not have been considered. Further, they may play a preventative function. As Weiden points out: "*the very existence of ethics committees as a potential resource for resolving ethical dilemmas may defuse issues, thus preventing disagreements or misunderstandings from escalating*" (Weiden, 1987). Finally, they may play a role also in the promotion of healthy and/or ethical behaviors in society.

In European countries where ethics consultation is established, the task force report of the *American Society of Bioethics and Humanities II ed*. (ASBH, 2011) is often used as a guide for the organization of consultation services (Pfäfflin et al., 2009). This reference has been written by this American nonprofit organization of healthcare professionals with an interest in the field of clinical and academic bioethics and the health-related humanities, to respond to the need for structured and professional ethics support for health workers. Thus, generally, European CECs play a similar role as in the American system: the consultation is oriented at helping to make ethical decisions. However, the main difference is that most of the European CECs do not have contact with

patients or families and their function is limited to suggesting or advising medical staff. Furthermore, Fletcher and Siegler wrote a statement in 1996 in which they define ethics consultation as *"a service provided by an individual consultant, team, or committee to address the ethical issues involved in a specific clinical case. Its central purpose is to improve the process and outcomes of the patient's care by helping to identify, analyze, and resolve ethical problems"*. While the ASBH report (2011) identify ethics consultation as "*a set of services provided by an individual or group in response to questions from patients, families, surrogates, healthcare professionals, or other involved parties who seek to resolve uncertainty or conflict regarding value-laden concerns that emerge in health care".* It specifies also that those who offer this service differ from other healthcare professionals as they respond to specific ethical dilemmas and questions that arise in the hospital setting. Therefore, a distinctive set of competencies and skills to perform this role effectively is required, despite the fact that there are different ways to offer an ethics consultation service. Bioethics literature during the past 30 years describes different attitudes that fall between two extremes: the "*authoritarian approach*" and the *"pure consensus approach*" (ASBH, 2011).

Both of these extremes have been rejected and an intermediary line of action is recommended. Nevertheless, for the *American Society for Bioethics and Humanities* (ASBH), the ethics consultation service should follow two steps for the resolution of a case. In the first one, they suggest reviewing the bioethics, medical and other scholarly literature and current professional or practice standards, statutes, judicial opinions, and other pertinent institutional policies. In the second step, they propose that, in the process of pursuing a resolution, CECs should be respectful of all the parties involved and their interests. However, there are also other models such as the Nijmegen approach, which suggests a four-step procedure with an emphasis on the moral question to be solved (Steinkamp and Gordijn, 2003), and the Basel method, which integrates reflection on principles and a systematic change of perspective (Reiter-Theil, 2005).

➢ *Core Skills and Knowledge for Clinical Ethics Consultants (CECs)*

The intervention of the CECs is often requested when patients, family members or healthcare staff disagree on a plan of care and there are conflicts and discordance. Ethical concerns related to decision-making capacity, informed consent, and end-of-life or beginning-of-life decisions are inextricably linked with medical, surgical, legal, and psychosocial issues. Given the nature and goals of ethics consultation, CECs must possess certain skills, competencies, and attributes in order to address these complex, multifaceted ethical problems (Parizeau, 1995; Aulisio, 1999; ASBH, 2011). These proficiencies, according to the task force report of the *American Society for Bioethics and Humanities* (ASBH), can be divided into three categories: 1) *ethical assessment and analysis skills,* like ethical reasoning, knowledge of ethical issues and concepts, but also the ability to identify the nature of the value uncertainty that underlies the need for consultation; 2) *process skills*, which refers to competencies in conducting an ethics consultation meeting. For example, the practice of convening a formal assembly or monitoring and improving own performance in order to contribute to ameliorating the quality of care. A retrospective review of medical ethics consultation services should include also both evaluation of each member of the team and consideration of its wider implications; 3) *interpersonal skills* that include, for instance, active listening to communicate interest, respect, support, and empathy, but also recognize and attend to various barriers to communication present among families and patients (sometimes also medical-nurse staff) which experience pain, moral distress, and/or strong emotion. Tolerance, patience, and compassion, as well as honesty, courage, prudence, and humility, are traits indispensable in order to conduct a consultation in the best way and build a trusting relationship. For a CEC it is also essential to understand how cultural and religious diversity, as well as biases based on race, ethnicity, gender, and disability, shape the context of an ethics case consultation. In fact, the multicultural nature of the healthcare setting makes knowledge of different cultures and faith communities critical for consultation (AMA, 2006).

Other advanced attitudes considered as important for a CEC are: leadership, problem-solving, moral reasoning, and decision-making, especially under stressful conditions. In the ASBH's task force these last competencies have not been reported. However, in general, there is a lack of studies regarding the assessment of moral reasoning or other related important skills. Furthermore, the few investigations to date on the moral attitude of CECs have used a deductive and quantitative approach and relied on Kohlberg's model (Racine, 2008).

According to the ASBH's task force, CECs should also possess specific knowledge in other fields of studies such as moral reasoning and ethical theory. In particular, they should know consequentialist and non-consequentialist approaches, as well as deontological approaches such as Kantian, natural law, communitarian and right theories. CECs should also be aware of common bioethical issues and conceptual notions that include patient's rights, self-determination, treatment refusal, privacy, informed contest, parental permission and assent for minors, end-of-life and beginning-of-life decision making, genetic and medical testing, as well organ donation and transplantation. In addition, they should study how to assess the competence or decision-making capacity of patients or family members. Indeed, judgments on decision-making capacity are crucial in health care because they determine the ability of patients to participate in choices about their care. Decision-making capacity is an intricate concept and it can be evaluated by assessing commonly four skills: 1) the ability to express a choice; 2) to understand relevant information; 3) to appreciate the significance of that information for one's situation, and 4) to engage in basic reasoning regarding treatment option (ASBH, 2015).

Furthermore, CECs should possess awareness about the healthcare system, including the strengths and weaknesses of the national health care system, and about the healthcare institution's policies. In particular, the policies on informed consent, pain management and palliative care, organ donation, and procurement, research involving human subjects, admissions, discharge and transfer of patients, withholding and withdrawing of life-sustaining treatment

or euthanasia. Finally, knowing similar notions about the organization where the service is provided is essential as well. Such information should include the mission of the institution, its structure, internal organization, and governance, but also its medical records system, and how to locate specific data in a patient's health record (ASBH, 2011).

❖ *Chapter II*

➢ *The Principal Theories on Moral Reasoning*

The concept of morality is traditionally considered as a set of values that guide the choices and the behaviors of mankind (Beauchamp and Childress, 2013). Cognitive psychology has the goal of explaining what are the patterns involved in the moral decision and, in particular, what supports and influences the judgments expressed by human beings. The ability to make moral decisions has been present since childhood and it is influenced by many different aspects: emotive, cognitive, gender (Friesdorf et al., 2015; Reber and Traner, 2017), and also religion or spiritual beliefs (Szekely et al., 2015a). Other factors such as social norms and moral rules, as seen in the previous chapter, also play an essential role in guiding moral reasoning (Bicchieri, 2016).

The traditional theory, taken into greater consideration until the second half of the last century, is the Kohlberg's "rationalist" model. It asserts that moral judgment is the result of different processes of deliberate thinking and reasoning. In this sense, the reasoning has a purely cognitive origin and individuals consciously judge and justify their moral choices. Furthermore, according to the Kohlberg's theory on the development of moral reasoning, this ability is linked to brain growth and the achievement of skills (e.g. empathy). Kohlberg's theories are closest to the Kantian idea of the "Categorical Imperative", according to which human actions must be subjected to the law of reason. As stated by the philosopher at the end of the eighteenth century, the human being must take these set moral principles into account and follow them unconditionally. For example, the lie is unacceptable even if necessary, such as in the case of preventing an act of violence against another human being.

However, starting from the 1980s, the attention focused on the so-called "moral emotions". Haidt is one of the leading exponents of this approach thanks to the "Socio-intuitionist model" he devised. This model is a critique of Kohlberg's idea because, according to Haidt, the judgment does not spring from

a rational moral reasoning but an intuition. Haidt, in defining his model, also diverges from Kant's perspective and embraces, instead, the philosophical thought of David Hume. Hume, in fact, in the mid-1700s argued that feelings play an essential role in the decision-making process and have the ability to drive human morality.

However, moral reasoning does not disappear completely with Haidt, since he believes that it is produced subsequently to justify the judgment. The moral intuition mentioned by the researcher is the result of a procedure in which a cause or an action is associated with a positive or negative feeling that occurs suddenly, without interpretative effort or awareness (Haidt, 2001). When this feeling is well-differentiated and clear, it is called "moral emotion". An example may be the feeling of embarrassment or disgust experienced in front of an incest scene. In matters such as abortion, drug addiction, death penalty or gay marriage, moral opinion can vary greatly. Therefore, it is believed that it is influenced both by the strong emotions these issues imply and by strong philosophical opinions. However, this hypothesis has been also criticized. For example, Haidt seems to reduce the intuitive process to the emotional one. Moreover, he does not clarify the role that culture plays in the process of the birth of social and moral norms and how these influence both intuition and reasoning. In fact, some acts and behaviors can become imbued with a moral meaning because of the context or the cultural background.

Nowadays studies still widely emphasize the fundamental contribution of emotional processes to moral judgments (e.g. Greene and Haidt, 2002; Haidt and Bjorklund, 2007; Conway and Gawronski, 2013; for a review: Helion and Ochsner, 2016). According to this recent approach, moral reasoning is considered to be the product of both rational-cognitive processes and of intuitive-automatic-emotional processes. The firsts, are, of course, activated at a conscious level and are associated with a cognitive effort of the subject. The individual has introspective access to his reasoning or thoughts as they take place on a conscious level. An individual is able, therefore, to reconstruct the steps that lead to the choice or the final behavior. The automatic processes,

instead, take place below the level of awareness and they do not require any effort from the person. For this reason, there is no introspective access to the steps that guide the decision or the judgment process. Furthermore, the experiments conducted with the use of neuroimaging techniques have shown that these processes are activated by different areas of the brain. Studies regarding the automatic cognitive process pointed out, indeed, that there is an activity in the back, upper and lateral parts of the brain, while the automatic emotional responses are originated in the amygdala, a structure of the limbic system involved, in particular, in managing emotions (for a review: Pascual et al., 2013; Helion and Ochsner, 2016).

In general, automatic processes constitute most of the brain's electrochemical activity and they represent its normal functioning. For this reason, they are constantly activated. On the other hand, controlled processes work only at particular times, such as when an individual has to face a new event or adjustment that obliges him to make a decision or solve a problem. In these cases, automatic processes are interrupted in favor of controlled processes. In addition, scientists believe that there is an interaction between the different systems, and that common behavior, including those related to decision-making, are the result of this interaction. In other words, "*how we think about something, is coupled with how we feel about something*" (Helion and Ochsner, 2016). However, these systems are also often in competition. This may happen when the emotional and cognitive processes guide the behavior towards conflicting directions. Therefore, in order to understand the behaviors of human beings, the last investigations are focused on exploring how these brain systems cooperate and, in particular, how the emotional content influences the cognitive processes.

➢ *Deontological vs. Utilitarian Reasoning*

Jeremy Bentham, in his work "*Deontology or Science of Morality*" (1834) describes for the first time the deontological approach, which is based mainly on the concept of duty. An action is conceived as good or positive in those situations where it tends to respect the moral principles that require or prohibit certain behaviors, while it is considered negative if it goes against such rules and values (Troyer, 2003). The Kantian theory is considered the one that is most characterized as deontological. Kant, as has already been illustrated, establish morality in human reason and defines it in terms of universal principles that man must respect unconditionally. In this sense, ends can never justify the means and, killing an innocent individual is considered to be always immoral, regardless of how many lives may be saved. Thus, a deontological person would justify his behavior by using a universal principle such as "*do not kill*" and saying "*I did it because it was right to do it*".

The utilitarian approach, instead, proposes that the goodness of an action must be judged by referring not to principles but consequences (Mill, 1861). According to this model, moral judgment is the result of an evaluation of the outcomes that can occur following an action (Bennis et al., 2010). An individual would defend himself with the expression "*the ends justify the means*" and that in doing so obtained the good. For example, during the Second World War, this person would have considered it right to mislead a Nazi (or kill him during an ambush) if the purpose was to protect Jews, even if lying or killing are two actions contrary to moral and social rules. In this approach, the focus is on the consequences generated by one's action, which have been ignored by the deontological approach. Therefore, the goal of this morality is to maximize the good, well-being, or happiness for the highest number of individuals (Troyer, 2003).

According to Greene (2008), these two approaches of moral inclination underlying moral judgment are guided by two distinct and independent processes. The author also argued that deontological and utilitarian inclinations are active at the same time. Furthermore, the final moral judgment is

determined by the relative strength of personal deontological and utilitarian inclinations. In order to identify the processes underlying the two kinds of moral judgments, Greene and colleagues examined the correlates of each type of judgment and the proportion of each judgment type across groups or conditions. They reached the conclusion that deontological judgments (e.g. disapproving of killing one person to save several others) are driven by automatic fast emotional responses, while characteristically utilitarian judgments (e.g. approving of killing one to save several others) are led by controlled slow cognitive processes based on the cost-benefits analysis. Greene also wrote new dilemmas-surveys where participants must categorize a harmful action as either acceptable or unacceptable, thereby endorsing either the deontological or utilitarian principle. An example is the dilemma of the "crying baby":

"It is war time. Enemy soldiers have taken over your village. They have orders to kill all remaining civilians. You and some of your townspeople have sought refuge in the cellar of a large house. Outside you hear the voices of soldiers who have come to search the house of valuables. A baby with no parents begins to cry loudly. You cover her mouth to block the sound. If you remove your hand from the baby's mouth her crying will summon the attention of the soldiers who will kill you and the others hiding out in the cellar. To save yourself and the others you must smother the child to death. Is it appropriate for you to smother the child in order to save yourself and the other townspeople from being killed?" (Greene et al., 2007)

The studies by Greene and colleagues (2001; 2004) have also found that subjects who answer faster to the dilemmas, also make more deontological judgments. This result has been interpreted as confirmation of the assumption that deontological judgments are based on emotions, while the utilitarian judgments on deliberate reasoning. Furthermore, they discovered that the cognitive load increases the average response time for utilitarian judgments but

not for deontological ones. Other studies have also confirmed this hypothesis. For example, Moore and colleagues (2008) have shown that individuals with greater working memory skills are more likely to make utilitarian judgments. On the other hand, also pushing subjects to respond quickly and intuitively to moral dilemmas leads to an increase in deontological judgments (Suter and Hertwig, 2001). Finally, people who suffer from deficits in emotional regulation make more deontological judgments (Zhang et al., 2017b).

However, Christensen and colleagues (2014) discuss that the instructions given to the participants, the length of the dilemmas (number of words) and the expressive style (that is, if they have been used familiar or complex words, or "saving" instead of "killing"), lead to give an answer rather than another and that both deontological judgments and utilitarian ones can be formulated with the same speed. This mentioned study, therefore, is contrary to the assumption that utilitarian judgments are based exclusively on deliberate reasoning and states that the results of the other studies are not reliable. Also other studies have shown that reduced empathy and less emotional aversion to harming others promoted utilitarian judgments without necessarily engaging deliberate reasoning (Gleichgerrcht and Young, 2013; Wiech et al., 2013). The main idea is that utilitarian responses may not be the exclusive result of deliberate thinking but of intuitive processes. According to Bialek and De Neys (2017), for instance, human beings have also the ability to intuitively grasp the utilitarian dimensions of moral judgments. This thought is in line with the theory of Mental Models by Johnson-Laird (2010) which states that utilitarian judgments can also be based on rapid and automatic processes.

Therefore, although Greene's dual-process model (2007) is one of the most conspicuous and famous theories in this field, moral dilemma research cannot determine whether the obtained effects reflect differences about the strength of a single moral inclination, or about the joint operation of two distinct predispositions (Conway and Gawronski, 2013). Some studies, for this reason, criticized also that utilitarian judgments may not reflect the presence of a moral inclination that is conceptually distinct from deontological concerns but

simply the absence of this one (Bartels and Pizarro, 2011). Thus, variations in moral judgment may not result from the joint operation of two distinct processes but from the relative strength of a single process underlying deontological inclinations. Moral dilemma research is centered on the assumption that high-conflict dilemmas arouse tension between the two inclinations like in the case of the "crying baby" (Koenigs et al., 2007), and that it is the strongest inclination to drive the behavioral response. Such conflict, indeed, would not occur if the two competing inclinations were inversely related.

➢ *The Role of Emotions on Moral Reasoning*

As seen in the previous paragraphs, emotions play a role in deliberating judgments and, thus, on moral reasoning. It is also well-known that moral dilemmas may induce negative emotions such as anger, contempt and disgust in people who have to make a decision (Avramova and Inbar, 2013). However, it is not clear yet how much emotions influence or impact their reasoning. Thus, several studies tested this hypothesis reaching consistent results. For instance, it has been reported that the resolution of Footbridge–type dilemmas elicit greater activity in the brain area associated with emotional processing, as compared to the Trolley-type dilemmas (Greene et al., 2001; 2004). Moreover, sacrificing one person to save more people provokes more intense negative and self-condemning emotions than letting some individuals die, and this reaction is deeper during the resolution of the Footbridge problem when the sacrifice is performed intentionally (Pletti et al., 2016).

In the studies where have been collected participants' emotional evaluations during the task (e.g. Choe, Min, 2011; Feinberg et al., 2012; Sarlo et al., 2012, Lotto et al., 2014, Lee, Gino, 2015; Szekely, Miu, 2015; Horne and Powell, 2016; Pletti et al., 2016, Zhang et al., 2017b; Li et al., 2017), which included asking them to report what action they would endorse in a moral

dilemma, not all of them showed the existence of an association between emotions and moral judgment. For this reason, the attention of authors focused in favor of the role of the individual differences in emotion regulation (e.g. Szekely and Miu, 2015; Lee, Gino, 2015; Zhang et al., 2017a, 2017b). These researchers maintain that different individuals might experience a similar emotion about the same situation but the degree to which this emotion impacts their judgments might vary substantially based on their abilities to control their emotional life. This hypothesis explains why individuals come to dramatically different conclusions even if they initially have the same automatic affective state. In general, participants point out that they try to predict how they would feel after having chosen each of the different alternatives and that they then select the option that minimizes the anticipated negative emotions. Therefore, individuals who are unwilling to smother the crying baby in the Greene dilemma set, and are being swayed by their emotions, choose usually to do nothing (a deontological choice) because they cannot bear the idea of hurting a helpless young child. The results of these studies support the dual model process of Greene (2007), as they highlight that cognitive reappraisal results in more utilitarian judgments; that individuals with more emotional regulation difficulties make more deontological judgments, and also that expressive suppression leads to more utilitarian judgments.

Recently, other investigations focused instead on the effect of incidental emotions on moral dilemma judgments (e.g. Schnall et al. 2008; Seidel and Prinz 2012; 2013; Gawronski et al., 2018). These studies differ from those already reported because the incidental emotion has been caused during the experiment to a group of subjects, while the control group instead did not receive an induction. Then, after the emotional induction, the group solve a list of dilemmas. Incidental emotions are "*states elicited by features of the broader context, which have no meaningful relation to the to-be-judged action*" (Gawronski et al., 2018). They have been considered particularly important by researchers because they demonstrate the context-dependent nature of moral judgments (Sinnott-Armstrong, 2011). So far, the attention of researchers has

focused especially on investigating the effects of negative incidental emotions on moral judgment such as sadness (e.g. Schnall et al., 2008; Gawronski et al., 2018) and anger (Polman and Ruttan, 2012; Seidel and Prinz, 2012; 2013; Gawronski et al., 2018), although there are studies which also explored the role of happiness (e.g. Seidel and Prinz, 2012; Gawronski et al., 2018;), guilt (Gangemi and Mancini, 2007) and disgust (e.g. Wheatley and Haidt, 2005; Schnall et al., 2008; Eskine et al., 2011;).

For what regards sadness, there are at least three ways by which it may influence moral reasoning. First, according to Valdesolo and De Steno (2006), feelings of sadness enhance concerns and sensitivity towards norm violations, or causing harm to innocents, and, thus, they may push individuals to select a deontological choice. Second, sadness is in general considered as a state of mind associated with low action and this may be another reason that could explain why people enhance a general preference for inaction, which is a deontological approach (Bodenhausen, Shepard and Kramer, 1994). However, finally, it has been shown that sadness tends to increase rumination and cognitive elaboration (Wegener and Petty, 1994). According to Greene's theory (2007), deontological inclinations are based on emotional reactions, yet in this case, sadness may be an interesting exception as it seems to promote a cognitive effort and so, utilitarian preferences. Anger could also be an exception to the dual model process given that it is thought to increase action tendencies and thus, could be responsible for more utilitarian choices (Russell, 2003). Some studies using the trolley problem found, in fact, that incidental anger is associated with a greater willingness to harm or sacrifice a life (e.g. Ugazio et al., 2012; Baron et al., 2018). Furthermore, unlike sadness, anger could be responsible for reducing the sensitivity to moral norms.

However, in a recent study of Gawronski and colleagues (2018), findings do not present significant effects of incidental sadness or anger on moral dilemma judgment, nor influence the willingness to act. Yet, as already said, there is to consider the role of the individual differences in emotional regulation, since every human being can react in different ways to the same

emotion. Indeed, the results of the study of Gawronski contrast with several previous works, like, for instance, the one of Seidel and Prinz (2013) or Nuñez (2015), in which anger participants were more likely to judge minor transgressions as wrong, or to give stronger punishments, in comparison to the no-angry control group. Also in the study of Lerner and colleagues (1998), after the anger induction, participants made more punitive attributions to individuals depicted in the moral vignettes, in comparison to the control group. Conversely, experimentally inhibiting anger has been shown to reduce the desire for punishment (Nelissen and Zeelenberg, 2009).

➢ *Regret and Anticipated Emotions*

Regret is commonly considered as an emotion associated with uncomfortable feelings for a decision that led to negative or not favorable results. It is also classically elicited by a comparison between the reality born from the outcome of the choice made and what might have been (the possible alternative outcome) (Coricelli et al., 2007). Regret embodies the lesson that things might have been better "if only" a different choice had been taken, inducing a disposition to behavioral change and learning process. According to Bourgeois-Gironde (2010), regret involves both emotional and cognitive components. Recent neurobiological tested this hypothesis in order to verify how regret and behavior influence each other, giving more credibility to the regret theory. For instance, Camille et al. (2004) and Coricelli et al. (2005) studies show that the orbitofrontal cortex has a fundamental role in experiencing regret and integrating cognitive and emotional components of the entire process of decision-making. The authors maintain that the orbitofrontal cortex works with a top-down process in which some cognitive components (e.g. counterfactual thinking), modulate both emotional and behavioral responses.

Anticipated regret (or future regret) is a different type of regret. It is characterized by a feeling of commitment and responsibility for the possible negative outcome of a choice and it works like a "predictive error signal" (Bell, 1982; Gilovich and Melvec, 1994). It is a cognitive strategy based on making a comparison among different options and rejecting simultaneously other alternatives (Coricelli et al., 2007). For this reason, given that the past regret experiences lead the person to an emotional motivated learning process, anticipated regret may be correlated with improved decision-making (Zeelenberg et al., 1996; Mellers et al., 1999; Bourgeois-Gironde, 2010) because it may induce a disposition to change behavioral strategies (Ritov, 1996).

According to the literature on this topic, individuals commonly experience feelings of remorse or anticipated regret and try to avoid them electing the action or option that may lead to the maximum expected utility or best outcome (Bell, 1982; Loomes and Sugden, 1982). Recently, Pletti and colleagues (2016) investigated if anticipated regret and other anticipated negative emotions, such as guilt, anger, and shame, may play a role in earlier stages of decision-making. Their findings show that participants reported generally stronger emotions of anger and regret in Trolley-type dilemmas related to the deontological option. Moreover, individuals choose the option with the lower anticipated emotional consequences. Therefore, when facing a moral dilemma, decisions are driven by an attempt to minimize post-decisional negative emotions.

In addition, anticipated regret is hypothesized to influence decision avoidant behavior. For instance, omitted answers to a moral dilemma (or inaction in real life) appear to function as a response to anticipated regret because the bias toward omissions is exaggerated by worse outcomes (Baron and Ritov, 2004). Given that inaction or omission may be connected to the deontological perspective of "doing nothing", it is logical to affirm that anticipated regret may push to make a deontological choice instead of a utilitarian. However, so far, there is a lack of investigations that tested this hypothesis.

Finally, it is also important to underline that individuals are not always accurate in predicting how they would feel after making a choice and that there is often a discrepancy between anticipated and actual post-decisional emotions. Furthermore, a wide range of emotions can influence individuals before making a decision: the so-called "anticipatory emotions" (Loewenstein et al., 2001). Anticipated emotions are experienced during the decision process and include states such as fear, anxiety, or dread. These mental states refer to potential future outcomes, as anticipated regret does, but the emotional experience itself occurs in the present time rather than in a mentally simulated future.

❖ Chapter III

➢ *Introduction to the Research Project*

As already explained, ethics are propositional statements that are used by members of a profession or group to determine the right course of action in a situation. It is not an esoteric or mysterious subject but a common component of daily lives. For example, almost daily, newspapers and other news media present fresh stories about moral conflict in areas of great public interest (e.g. euthanasia or assisted suicide, embryo research, etc). Some scholars believe that the ethical process relies only on logical and rational criteria to reach a decision (Congress, 1999; Dolgoff et al., 2009; Reamer, 1995; Robison and Reeser, 2002), yet other authors think that judgments are also driven by automatic emotional responses (Greene et al., 2008).

In light of the ongoing development and implementation of the CECs during the last decades and of their key role in deciding the next course of actions that must be taken regarding the health of patients, it is important to understand how the bioethics knowledge and the cognitive and emotional processes are utilized by the CECs during the moral reasoning and decision-making process. Some questions that may arise include: how do they face an ethical medical case? How do they "solve" it? What happens in their brain when they approach an end-of-life decision? Do they have regrets or do they feel fear? CECs members could also reach an incorrect conclusion because of bias toward the interests of hospital management, laws, personal beliefs, or presentations or oversimplifications of circumstances (Magelssen, Pedersen, Førde, 2014). Previous findings on this topic addressed the level of the moral reasoning skills of consultants (e.g. Self and Skeel, 1991; Self and Skeel, 1998) or the experience of the consultants in deliberating, or potential bias (e.g. Pedersen et al., 2009a; 2009b; Magelssen et al., 2014). However, these studies do not answer the questions mentioned. For this reason, in the present study, an investigation on the emotions and feelings experienced by CECs during case deliberation has

been carried out, and further, if they play a role in the moral reasoning during the decision making process.

The study was conducted in two phases. The first one included a semistructured interview mailed to American and European CECs. This interview sought to understand how CEC members based in different countries face and solve medical ethical dilemmas and, in particular, what moral principles they take into consideration. Emotions, feelings, sensations, thoughts or doubts that they experienced during the case deliberation have been explored as well. In fact, CECs face every day a complex work setting composed of hard conflicts and individuals who are emotionally vulnerable (Pochard, Azoulay, Chevret, et al., 2001), and so, they may experience moral distress or fear.

The second phase involved a list of dilemmas mailed only to American subjects, to which they were asked to choose between a deontological or utilitarian response. As seen in the previous chapters, European consultants tend to act in a different way depending on their country's laws. For example, most tend to provide only a recommendation to the physician without meeting those involved in the medical care (patient or family members included). American consultants instead, have all the responsibility of their decision and speak directly with the patients and/or the family members, as well the entire medical team. Thus, for this study, it was decided to select an American group of consultants, in order to have a heterogeneous sample with a similar cultural background and a similar approach to ethical dilemmas. Furthermore, given that their task is much more complex and carries a burden of greater responsibility, it was thought that it would provide a better opportunity to understand their reasoning process.

The dilemmas used for this study have been constructed based on real cases that CECs members may face during their practice and from the ones described in the literature (Conway and Gawrosnki, 2013), and later modified according to the suggestions provided by previous research regarding the procedure to follow when writing an ethical dilemma (e.g. Christensen et al.,

2014). One of the instructions provided is to keep the dilemmas always with the same numbers of words. Moreover, every dilemma has only a "yes" or "no" answer, which has been questioned with the same simple sentence structure. Finally, dilemmas were introduced without mentioning technical or specific words that could influence the outcome (like "moral dilemma", "kill", "sacrifice", or "save"). Before and after every dilemma, participants had to select the emotions they were feeling from a list provided. For this second goal, the PANAS scale, a self-report questionnaire that consists of two 10-item scales that measure both positive and negative affect, was inserted (Watson, Clark, 1999). (The entire corpus of the survey is in the appendix section).

➢ *The Semistructured Interview*

So far, there are no studies that investigate the emotional experience of CECs during or after case deliberation, and if it impacts their moral judgment. Thus, these topics have been first explored through a semistructured interview composed of 10 questions (the complete interview is in the appendix). In order to collect more data and help non-English speaking consultants, the interview has been translated and collected also in Spanish and French. Initially, demographics data like gender, the highest level of education (included the field), country of origin, and years of service were requested, in addition to consent to participate in the study.

The first question of the interview asks CECs to choose and describe a clinical case they faced and considered as "challenging" –an ambivalent word that could be interpreted both positively and negatively. This ambivalent term was used that subjects were not influenced in the choice of the case by other more specific words like "easy" or "hard". This question aims to stimulate the memories of consultants so that they freely select a past case they remember well.

In order to understand the process of deliberation of this case and to permit subjects to recollect their strongest memories, other questions for elaboration included:

- *What do you consider to be the primary ethical issue or dilemma raised by the situation that you described?*
- *How did you face this clinical case?*
- *What thoughts or reflections came up handling this case?*
- *What factors, values or variables did you take into consideration in order to make your decision?*

Then, CECs were asked about the emotions or feelings they experienced during and after the case deliberation ("after" means now, in the present time, while answering to the interview and not immediately after the deliberation). Emotions and feelings were not listed to avoid undue influence on subjects' choice. Thus, also in this case, the question was left open. The last three questions regard feelings of regret. CECs were asked if they experienced regret regarding this case; if they would change something if they had the possibility; and if they would confirm their choice or not.

- ***Aim***

The goal of the semistructured interview was to explore the experience of consultants in facing a real ethical case met at work and freely selected. In particular, the attention was focused especially on the emotional aspect, in order to investigate what kind of emotions or feelings consultants experienced during and after a case deliberation.

▪ *Method*

- *Participants*

The clinical ethics consultants that have been recruited through e-mail are from the USA and 8 European countries (United Kingdom, Ireland, France, Spain, Germany, Switzerland, Norway, and the Netherlands). In total, 37 subjects were interviewed and 83.8% of them are European, while 16.2% are from The United States.

- *Procedures*

The interview was developed during spring and summer 2018. Then, it was sent to participants by e-mail through the Google Form platform, during fall and winter 2018. Participants have been contacted personally in English, French, or Spanish, after having found their names and affiliations on different web platforms of hospitals or associations that provide clinical ethics consultation services (e.g. Ukcen.net, Eacmeweb.com, etc.). Permission for participating in the study was collected as well.

- *Data analyses*

Demographic data have been analyzed with the statistics software SPSS.20 and a frequency analysis was conducted. The open questions of the interview have been analyzed with a different methodology. According to the work of Cortini and Tria (2014), there are three possible ways of approaching textual or narrative material. The first focuses on how speeches have been told, that is, how it was performed and what metaphors or peculiar words were used. A second method suggested aims to analyze the references made – e.g. the number of repetitions of specific words and word associations. Finally, a third way consists of a mixed-method that takes advantage of both the qualitative and quantitative perspectives.

In this paper, it was conducted through a content analysis selecting the mixed method, that addresses both the number of repetitions and the words used. The questions regarding the description of the case, the ethical issue, and the emotions or feelings experienced have been analyzed through a content analysis that included a manual frequency count of the keywords used, followed by a frequency analysis of the data performed with SPSS.20. In particular, for what regard the clinical cases, answers were read multiple times and coded based on the main medical problem or condition of the patient. Later, they were clustered according to the similarity criterion so that elements within each cluster are strongly connected among themselves and, at the same time, different from the elements of the others. The title given to each category is related to the content and summarizes the most recurrent theme for that specific cluster based on the highest frequency. Likewise, it has been done with the ethical issues.

According to the definitions and reviews provided by the literature (e.g. Watson and Lee, 1999; Cohn and Fredrickson, 2009; Cambria, Livingstone, and Hussain, 2012), emotions and feelings were instead coded as negative or positive, and if experienced during or after the deliberation process. Some of the keywords were categorized in groups or clusters according to the similarity criterion and based on their conceptual definition or meaning (like *sadness* and *sorrow*). In summary, emotions were divided in four groups labelled: *negative_emo_during; positive_emo_during*; *negative_emo_after*; *positive_emo_after*. Finally, it has also been performed the Test T procedure for paired samples using the clusters of emotions as variables. This analysis allows to compare the means of two variables for a single group and calculates the differences between the values of the two variables for each case. Yet the Test T can also be applied to verify a change between a first and a second measurement, carried out on the same individual or the same sample, repeated over time. In the Student's t-test for paired data, the variable under consideration is represented by the difference between the pairs of observations.

▪ Results

- *Demographics Data*

Of the 37 CECs that completed the interview, 65% were male, while 35% were female, with an age range from 31 to 70 of age, with the majority between 51 and 60 years (35.1% of total). Everyone has a high level of education in the field of philosophy, bioethics/clinical ethics, or medical sciences. In particular, 48.6% of them earned a Ph.D. in philosophy, bioethics, medical ethics, or medicine. Twenty-seven percent of participants were physicians (e.g. geneticist, oncologist, etc.), while 24.3% have other graduate degrees in the fields of theology, bioethics, or health care (e.g. nurse, social work).

Regarding, years of experience as an ethicist, 59.5% reported a long career (over 10 years), while 18.9% and 21.6% of consultants declared less than 5 years or between 5 and 10 years of service.

- *Cases Selected and Primary Ethical Issues*

The cases selected by the ethical consultants were varied different and complex and summarized in table 1. This data underlines the variety of the clinically challenging situations that can occur within a hospital, and the difficulty of the team of ethical consultants in finding an ethical agreement shared by those involved (patients, doctors, families, etc.). This may be true especially when the patient is not able to express an opinion or when there is no agreement among the parts.

Almost half of the cases described by those interviewed (40.5%) concern a terminal patient within a range of ages, including minors. Indeed, the attention of participants was not focused on a single age group or category of the patient population but addressed situations including infants, adults, elders, oncologic or psychiatric terminally ill patients. Thus, the first cluster was labeled "*terminally ill patient*". The second category of most mentioned cases (24.3%) has been labeled by the researcher as "*multi-complex patient*". This cluster

concerns medical cases where the patient suffers from multiple problems or illness at the same time and the medical team is hesitant about how to proceed.

Finally, it is also interesting to note that 10.8% of the subjects interviewed mentioned the personal divergence of opinions among the various team members (e.g. among physicians or between two different health specialists) as an ethical problem they had to face. Thus, this cluster was labeled "*Disagreement within the team*". The last categories of cases reported concern for patients in coma or vegetative state (8.1%), abortion request for other reason not related to a medical condition (5.4%), a euthanasia request (2.7%), an issue of misdiagnosis (2.7%), and DNR ("do not resuscitate") or CPR (cardiopulmonary resuscitation) preferences (2.7%). There was also an interesting report of an episode of racial discrimination (2.7%).

	Frequency	**Percentage**
Terminally_ill_patient	15	40,5
Multicomplex_patient	9	24,3
Disagreement_Team	4	10,8
Coma	3	8,1
Abortion_NoMed_Reason	2	5,4
Misdiagnosis	1	2,7
Euthanasia	1	2,7
DNR_CPR	1	2,7
Racial_Discrimination	1	2,7
Total	37	100,0

Table 1- Cases selected and primary ethical issues

The ethical questions regarded requests for suspension of care (withdraw, 29.7%), or refusal (withhold, 10.8%), or both (13.5%). In other cases (32.4%), a consultation was asked for other medical decisions that needed to be made (e.g. whether or not to provide surgery, abortion or a different treatment/therapy, whatever or not to discharge and how to proceed, etc.). Other requests for consultation regarded how to solve a disagreement within the health team (8.1%) and a case of racial discrimination (2.7%). Finally, a

single question was about the request of some family members to keep secret from the patient an ominous diagnosis (2.7%).

In light of these data, it is clear that most of the cases cited concerned an ethical problem related to the patient's autonomy and/or well-being. Thus, most of the consultant's discussions dealt with this topic, especially in cases where the patient was not able to share his wishes, but also in cases of conflicts between the patient's will and the family or physician's opinion; this lead to debate by the ethicists around understanding what might be the best choice for the patient, that would avoid harm to the patient (according to the no maleficence value), but also how to provide the best care (according to the beneficence value). Fewer cases concerned instead, the topic of justice and welfare (like in the case of racial discrimination).

- ***Emotions or feelings experienced during the case deliberation***

The emotions or feelings that consultants experienced during the discussion and the deliberation of the case have been classified as negative and positive. However, it is striking that as many as 70% of the subjects said to have experienced especially negative emotions or feelings, while only 28.3% described positive emotions. Finally, 1.7% claimed to not feel anything.

As reported in table 2, the negative emotions or feelings that subjects experienced are many and varied. The most quoted are: frustration (23.8%), sadness or sorrow (19%), followed by anger or irritation (16.7%). Additional emotions reported are important and informative about consultants' experience, even if less often quoted. For example, consultants experienced insecurity or confusion (9.5%) and fear (7.1%).

	Frequency	**Percentage**
Frustration	10	23,8
Sadness/sorrow	8	19,0
Anger/Irritation	7	16,7

Insecurity/Confusion	4	9,5
Fear	3	7,1
Helplessness	2	4,8
Distress	2	4,8
Concern	2	4,8
Disappointment	2	4,8
Anxiety	1	2,4
Regret	1	2,4
Total	42	100,0

Table 2- Negative emotions or feeling experienced during deliberation

As already seen before, the percentage of emotions or feelings described by subjects and labeled as positive or neutral is lower in comparison to the negative emotions or feelings reported. However, the data are significant as well because they give a more complete perspective of consultants' personal experience. In this section, the emotions or feelings most quoted were: feelings of commitment or responsibility (16.7%), feelings of empathy or compassion (16.7%), pride (4.8%), and curiosity (2.4%). Therefore, despite the hard context, consultants also experienced feelings of sympathy and humanity toward the patients and families.

- ***Emotions or Feelings Experienced After the Case Deliberation***

In the present time, that is, after the deliberation of the ethical case reported by consultants, 53.5% of the subject experienced positive emotions or feelings. However, 34.9% continue to experience the same negative emotions. Finally, 7% of the subjects reported not feeling anything, while 4.7% did not answer the question. It is interesting to note that they wrote to have experienced the same negative emotions or feelings that emerged during the deliberation, yet with a lower frequency. The most quoted included: frustration (33.3%), sadness or sorrow (20%), anger (20%), helplessness (13.3%), concern (6.7%). Some consultants added a feeling of solitude (6.7%), highlighting,

perhaps, the need for speaking with someone about the case or personal experience.

However, the number of positive or neutral emotions or feelings that have been reported is interesting as well. As reported in table 3, the most quoted included: feelings of satisfaction (43.5%), peace or relief (34.8%), and commitment (13%).

	Frequency	Percentage
Satisfaction	10	43,5
Peace/Relief	8	34,8
Commitment	3	13,0
Compassion	1	4,3
Curiosity	1	4,3
Total	**23**	**100,0**

Table 3- Positive emotions or feelings experienced after deliberation

- ***A Comparison Between Emotions Experienced During and After the Deliberation***

The Test of T applied in this case aims to explore and verify if there was a change in the emotions felt by the participants, between the first and the second measurement, carried out on the same individual. In the Student's t-test for paired data, the variable under consideration was thus the pair of clusters of emotions, and the period of administration of the questionnaire.

There is a significant difference in the valence (positive vs. negative) of the emotions felt during the deliberation process. Participants perceived a higher number of negative emotions (M: 1,2703; SD: 1,07105), than positive ones (M: ,3784; SD: ,54525; t (36): 4,6; p: > .001). They also experienced a higher number of negative emotions (M: 1,2703; SD: 1,07105) especially during the deliberation process, than after it (M: ,5135; SD: ,80352; t (36): 3,6; p: < .001). Any differences were found neither between the negative (M: ,5135; SD: ,80352) and the positive emotions (M: ,5676; SD: ,55480) after the deliberation process (t (36): .3; p: ns), nor in the positive emotions felt during (M: ,3784; SD:

,54525) and after the decision (M: 5676; SD: ,55480; t (36): 1.8; p: ns). These data further show what emerged from the descriptive statistics presented in the previous paragraphs, confirming that the negative emotions were felt by the participants in a more predominant way, but only during the decision-making phase.

- ***Did Clinical Ethics Consultants Experience Regret?***

The aim of the last three questions of the interview was to explore if CECs experienced or not regrets or remorse during their practice and, in particular, regarding the case selected for this study. Firstly, it has been asked if they had the feeling that they *did not handle correctly the situation and/or if they would have liked to do something or act differently if they had had the possibility*. Thus, the first question does not use the word "regret" in order to not influence the answer of the participants. In fact, the consultant could negate at a subconscious level this emotion to avoid feelings of guilt, shame or self-condemning. Furthermore, it has been shown that the human mind often perceives intuitively to have done something wrong but it is not able to understand or explain what or why. This spontaneous, subtle sensation of cognitive uneasiness arising from conflict detection during the thinking has been called "*feeling of error*" (FOE, Gangemi, et al., 2015)[4]. For example, in the study by Gangemi, Bourgeois-Gironde and Mancini (2015), data indicate that participants who failed in the task also experienced FOE to a greater extent, than those who experienced success.

In the present study, during the interview, the FOE-Questionnaire was not proposed because consultants did not have to answer an experimental logic task known to generate a large number of errors yet; as already mentioned, they were asked to describe their personal experience in "solving" an ethical case. However, the first simple open question permitted an initial reflection in

[4] The opposite phenomenon has been called Feeling of Rightness (FOR; Prowse Turner and Thompson, 2009), when subjects usually produce an initial positive intuitive answer, accompanied by a metacognitive experience and the sensation of "being right".

participants' minds about their past actions and learn that 46% perceived an unpleasant sensation of having done something wrong or not completely correct. Some of them also admitted that if they could go back in time they would act differently. 54% of the subject stated they had managed or handled the situation well from beginning to end.

The second question asked was if consultants had *regrets regarding this case*. This time the word "regret" was used openly and the results are different. The percentage, indeed, changes dramatically: 22% of participants (24% less, in comparison to the question above) declared they have experienced regret or remorse, while 78% did not.

Finally, consultants were asked if *they would confirm their choice or not*, that is, if they regret their final decision or not. Most of the consultants declared they would confirm again their choice in the present time and, thus, they have no regrets (81%). However, 11% of participants stated that "*perhaps*" they would change their decision, showing insecurity and hesitation. Finally, some consultants openly stated that, in hindsight, they would change their decision (5% of total), and one who did not answer (3% of total).

- ***Discussion of results***

The semistructured interview was used to explore the process of deliberation and the emotions or feelings experienced by consultants. The dilemmas that were most often reported as "challenging" involved especially complex medical cases requiring discussion about how to proceed next with interventions or, sometimes, if better to withhold and/or withdraw therapies. Given that moral dilemmas tend to induce negative emotions in those who have to make such decisions (Avramova and Inbar, 2013), the second part of the interview further explored this hypothesis. Indeed, participants described their experience of both negative and positive emotions or feelings during the discussion and deliberation of the case. However, the majority of them (70% of the subjects) reported significant distress secondary to negative emotions. The

most quoted were: *sadness*, *anger*, and *frustration*. These same emotions were also experienced after the deliberation. Not all subjects indicated the period in which the clinical case occurred, however, the discussion could have taken place weeks, months or even a year before the interview was completed. Thus, it is interesting to note how these negative emotions concerning a single case persist over varying lengths of time and may influence the decision-making abilities of the consultant. Furthermore, given that CECs may discuss multiple ethical issues or cases during a single day or week, their emotions or feelings could lead to a higher level of stress and, therefore, to the potential development, or worsening, of other disorders like addictions, psychosomatic symptoms, depression, anxiety or limited attention/concentration.

The positive or neutral emotions experienced during the deliberation included *commitment*, *empathy*, and *compassion*; however, after the deliberation, emotions or feelings of *satisfaction*, *peace* and *relief* prevailed. It is interesting to note that the percentage of *compassion* experienced in the present time (after deliberation) is much lower (only 4.3%), in comparison to the one that emerged during the deliberation phase (41.2%). It is curious because most of the patients in the cases reported, children included, passed away, after providers had to withdraw or withhold health care therapies or interventions. Therefore, one would expect a higher level of compassion and empathy, yet also sadness, for the deceased and family members. This data is noteworthy because it may bring to light some hidden defense mechanisms used when providers face the death of a patient, something that always negatively affects mankind. However, in order to test this hypothesis, further studies should be conducted.

The results regarding regret are interesting as well. Almost half of the consultants interviewed, for instance, stated that they experienced some remorse regarding the case, adding that, if they could return to the past, they would act differently on particular occasions. Finally, they were asked if they would confirm the decision again or not, and, sadly, 11% said that "*perhaps*" they would, while two consultants openly stated that they would. This data is noteworthy because in some countries, the decision deliberated by the ethics

consultants is often the final one, or, in any case, their opinion is held in serious consideration by physicians. It also means that something may have negatively affected their thinking, as if something had, at that time, prevented them from focusing clearly on the situation, or on some elements of the same. After the events, in fact, once allowed a certain mental distance from the uncomfortable situation, some might proceed differently.

➢ *Introduction to the experiment*

As already described, CECs experience a wide range of emotions during the deliberation of an ethical question. Thus, it is important to understand how the emotional processes are utilized by each during the moral reasoning and decision-making process. For this reason, a group of American ethical consultants has been presented 6 moral dilemmas similar to real clinical cases. In addition to choosing between two options (one utilitarian and the other deontological), they are asked to report the emotions experienced at the beginning and the end of each dilemma. Emotions are expected to influence the judgment and the decision making of consultants. It is therefore expected that consultants will initially give more utilitarian and reasoned answers, and that, as emotions and stress become stronger or prevalent, deontological responses may also increase.

The dilemmas used for this study were edited to make them more realistic. Not all of them, therefore, reflect the pattern of the classic moral dilemma of the trolley or footbridge problem. However, this choice was made voluntarily for two reasons. The first is that, in the hospital reality of the western world, except during unique and exceptional historic moments, it is difficult to encounter situations where one must sacrifice a person to save many others. Thus, efforts have been made to encourage identification of the situations described and to increase, as consequence, the intensity of the emotional experience of subjects. The final purpose of this choice was, in fact, to

minimize the gap between reality and simulation (it is obvious to say that in reality, the emotional arousal is more intense due to the influence of other factors not present during the simulation). Second, many cases faced daily by ethical consultants do not need significant reasoning to be solved, nor do they provoke strong emotional conflicts or moral distress, as there are pre-established protocols or laws that guide or regulate the process of deliberation, activating sometimes automatic responses in the mind of the ethicist. Instead, in the present study, instead, the intention was to put the consultant in front of complex moral choices that pushed him or her to reason without appealing to or being guided by rules or specific protocols. In summary, an attempt has been made to eliminate some of the variables that can influence the choice in everyday work life, such as the discussion of the case in a commission or with the team, beyond the simple implementation of certain laws or protocols. Despite this, there are many other variables that, unfortunately, may have influenced reasoning and decision making, but which cannot be eliminated, such as cognitive bias, personal beliefs, cultural background, daily routine, etc.

▪ *Aims of the Experiment*

In this study, the goals were to:

1. Verify if CECs tend to give more deontological or utilitarian answers.
2. Examine what kind of emotions CECs report and with what intensity.
3. Discover if the emotion influenced or not the probability of choosing an option.

▪ *Method*

- **Participants**

Participants were 27 Clinical Ethics Consultants (CECs) practicing in the U.S. (9 males and 18 females). Few responded to questions regarding the location of employment, but those who replied indicated: Pennsylvania (1), New

York (1), California (1), Michigan (1), Illinois (1), Minnesota (2). Thus, the full sample is believed to be distributed throughout the U.S.

- **Procedures**

The survey was built during spring 2019 and sent by e-mail to American CECs during summer 2019 through the ASBH (American Society of Bioethics and Humanities) database. An introduction to the study was provided along with a request for participation.

- **Data Analyses**

Initially, frequency analyses were performed on demographics data using SPSS.20 statistic software. The same frequency analysis was utilized to check responses to each story. T-test procedure for paired samples was used to address the second aim of the study, related to the emotions and arousal reported. This analysis allows comparison of the means of two variables for a single group and calculates the differences between the values of the two variables for each case, checking whether the average is different from 0. Given that there were six stories, a Test T analysis was conducted for every emotion before and after each story.

Finally, in order to verify if the emotion influenced the probability of choosing an option, a Logistical Regression analysis was performed. This is useful when one wants to predict the presence or absence of a feature or result based on the values of a set of estimator variables (e.g., elements that can predict the risk of cardiovascular disease, but also how much more likely smokers are to develop cardiovascular disorders than non-smokers). In this case, the binary regression option was selected, a model that takes into consideration a dichotomous dependent variable, like in this study. Thus, the dependent variable used was the type of response, utilitarian (0) or deontological (1), while the independent variable included the emotions experienced (interest; worry/concern; happiness; sadness/sorrow;

anger/irritation; distress; frustration; fear; regret; enthusiasm; pride; peace/serenity; relief; commitment/responsibility; satisfaction; curiosity). The Logistical Regression analysis was conducted for each story with all emotions. Subsequently, the analysis was repeated for every single emotion that was significant, in order to check that the significance was real and not a false positive.

In the end, in order to verify if other factors played a role during the reasoning phase, another Logistic Regression analysis was performed. For this second-check step, independent variables included gender, age, years of experience as an ethicist, years of education, and field of study.

▪ *Results*

- *Demographic Data*

Of the 27 CECs that completed the survey, 33.3% were male, while 66.7% were female, with an age range between 30 and 70 years (average age 52.6). Everyone had a strong educational background in the fields of philosophy, bioethics/clinical ethics, or medical sciences. In particular, 55.6% of them earned a Ph.D., mostly in philosophy, bioethics or medical ethics, 22.2% were physicians, while 22.2% had a master's degree in the fields of theology, counseling, bioethics or medical humanities. Regarding years of service, 48.1% of subjects had many years of experience as a consultant (over 15 years), whereas 33.3% and 18.5% of subjects declared less than 5 years or between 6 and 15 years of service.

- *How Clinical Ethics Consultants answered the dilemmas*

As reported in the following table (Table 4), CECs gave more deontological answers than utilitarian to all the stories or dilemmas. In particular, for the first and third story, the percentage of deontological answers reached over 80%, while for the fifth and sixth stories the percentage is over

70%. The two stories with fewer deontological answers were the second and fourth.

	Utilitarian	*Deontological*			
	Percentual answers	**Percentual answers**	**M**	**SD**	X^2
Story 1	18.5%	81.5%	1,8148	,39585	10,704
Story 2	33.3%	66.7%	1,6667	,48038	3,000
Story 3	11.1%	88.9%	1,8889	,32026	16,333
Story 4	44.4%	55.6%	1,5556	,50637	,333
Story 5	25.9%	74.1%	1,7407	,44658	6,259
Story 6	29.6%	70.4%	1,7037	,46532	4,481

Table 4- Percentage of answers given per each story

- ***What Emotions or Feelings Were Reported and with What Intensity?***

In order to explore the emotions or feelings reported by CECs and with what intensity, a Test T procedure was performed with paired samples for each story. In this way, it was possible to compare the emotions before and after each dilemma. Given that each emotion or feeling is rated on a 6-point scale of 0 (not at all) to 5 (very much), the intermediate value between the upper and lower end explains the average arousal.

As reported in Table 5, on page 52 and 53, the emotions or feelings generally experienced more often before starting the task were "*Interest*" (M= 3,1481; SD= 2,9630) and "*Curiosity*" (M= 3,0741; SD= 1,49167) (Of the 6-point scale, 3 was the minimum point kept in order to be considered). The data for "I*nterest*" and "*Curiosity*" decreased after the first story, as the mean of the overall data was lower.

	Story 1			Story 2			Story 3			Story 4			Storia 5			Story 6		
	M	**SD**	**SE**	**M**	**SD**	**SE**	**M**	**SD**	**SE**	**M**	**SD**	**SE**	**M**	**SD**	**SE**	**M**	**SD**	**SE**
Interest_PRE	3,1481	1,16697	,22458	2,7407	1,45688	,28038	2,4074	1,75979	,33867	2,1852	1,75493	,33774	1,8519	1,68029	,32337	1,8519	1,81243	,34880
Interest_POST	2,9630	1,45395	,27981	2,6667	1,54422	,29719	2,2593	1,76706	,34007	2,2222	1,78311	,34316	2,1481	1,68029	,32337	2,2963	1,61280	,31038
Worry_PRE	,2222	,64051	,12327	,4074	,79707	,15340	,5556	1,21950	,23469	,4815	1,12217	,21596	,4444	,97402	,18745	,4444	1,05003	,20208
Worry_POST	1,4444	1,52753	,29397	1,1852	1,52005	,29253	,7407	1,43024	,27525	1,8519	1,83353	,35286	,9630	1,34397	,25865	1,5185	1,76222	,33914
Happiness_PRE	1,8148	1,33119	,25619	1,2593	1,55891	,30001	,9259	1,43918	,27697	,8519	1,35032	,25987	,5556	1,21950	,23469	,5926	1,30853	,25183
Happiness_POST	,8519	1,40613	,27061	,5926	1,30853	,25183	,7037	1,35348	,26048	,4815	1,18874	,22877	,5185	1,25178	,24091	,5185	1,31179	,25245
Sadness_PRE	,1852	,62247	,11979	,1481	,45605	,08777	,3333	1,03775	,19971	,0741	,26688	,05136	,3333	,73380	,14122	,2222	,69798	,13433
Sadness_POST	1,1481	1,16697	,22458	1,0741	1,26873	,24417	,2222	,50637	,09745	1,2963	1,35348	,26048	,6667	,96077	,18490	1,0000	1,17670	,22646
Anger_PRE	1,1111	,32026	,06163	,6667	1,03775	,19971	1,0370	1,28547	,24739	1,0000	1,41421	,27217	1,2222	1,64862	,31728	1,4444	1,78311	,34316
Anger_POST	2,556	,89156	,17158	1,1481	1,13353	,21815	1,0370	1,53125	,29469	1,0000	1,46760	,28244	1,1111	1,52753	,29397	1,4815	1,55342	,29896
Distress_PRE	,0370	,19245	,03704	,1852	,48334	,09302	,3704	,79169	,15236	,3704	,74152	,14271	,4444	,89156	,17158	,6296	1,18153	,22739
Distress_POST	,7407	,90267	,17372	,7778	1,01274	,19490	,5926	1,24836	,24025	1,1852	1,41522	,27236	1,0370	1,31505	,25308	1,6667	1,59326	,30662
Frustration_PRE	,0000	,00000	,00000	,6667	1,20894	,23266	1,1852	1,59415	,30679	1,1481	1,56165	,30054	1,5185	1,74026	,33491	1,6667	1,88108	,36201
Frustration_POST	1,1111	1,28103	,24653	1,0370	1,15962	,22317	1,1852	1,64169	,31594	1,5185	1,94877	,37504	1,5556	1,73944	,33475	1,7778	1,69464	,32613
Fear_PRE	,0000	,00000	,00000	,0741	,26688	,05136	,0370	,19245	,03704	,0370	,19245	,03704	,1111	,42366	,08153	,0370	,19245	,03704
Fear_POST	,3704	1,00568	,19354	,1481	,53376	,10272	,2222	,69798	,13433	,3704	1,04323	,20077	,3704	1,00568	,19354	,5556	1,33973	,25783
Regret_PRE	,0370	,19245	,03704	,2222	,57735	,11111	,3333	,87706	,16879	,3333	,96077	,18490	,7778	1,52753	,29397	,7037	1,61280	,31038
Regret_POST	,3704	,92604	,17822	,4074	,74726	,14381	,4444	1,15470	,22222	,5926	1,36605	,26290	,8889	1,50214	,28909	,8519	1,45981	,28094
Enthusiasm_PRE	1,7778	1,45002	,27906	1,1852	1,38778	,26708	1,0741	1,61545	,31089	1,0000	1,41421	,27217	,7037	1,26536	,24352	,7778	1,39596	,26865
Enthusiasm_POST	,9259	1,41220	,27178	,6296	1,30526	,25120	,9259	1,43918	,27697	,4074	1,08342	,20850	,4815	1,25178	,24091	,7407	1,48305	,28541
Pride_PRE	1,2222	1,39596	,26865	1,0000	1,35873	,26149	,7407	1,22765	,23626	,6296	1,14852	,22103	,4815	,89315	,17189	,4815	1,01414	,19517
Pride_POST	,5556	1,05003	,20208	,5556	1,05003	,20208	,5556	1,12090	,21572	,6296	1,00568	,19354	,2593	,76423	,14708	,5556	1,12090	,21572
Peace_PRE	2,1481	1,43322	,27582	1,5926	1,59950	,30782	1,2593	1,58339	,30472	1,1481	1,56165	,30054	,9630	1,55617	,29948	,9259	1,63909	,31544
Peace_POST	1,4815	1,50308	,28927	1,1481	1,63387	,31444	1,1481	1,61015	,30987	,7407	1,53404	,29523	,8519	1,61015	,30987	1,1852	1,71053	,32919
Relief_PRE	,3333	,6737	,13074	,4074	1,04731	,20156	,4074	1,11835	,21523	,3704	1,07946	,20774	,4444	,93370	,17969	,3333	1,03775	,19971

	Story 1			Story 2			Story 3			Story 4			Storia 5			Story 6		
	M	**SD**	**SE**	**M**	**SD**	**SE**	**M**	**SD**	**SE**	**M**	**SD**	**SE**	**M**	**SD**	**SE**	**M**	**SD**	**SE**
Relief_POST	,4074	1,08342	,20850	,4074	1,08342	,20850	,4444	1,12090	,21572	,4074	1,00992	,19436	,3704	,88353	,17004	,2593	,71213	,13705
Commitment_PRE	2,3704	1,54791	,29789	1,7778	1,62512	,31276	2,0741	1,66239	,31993	1,9259	1,70803	,32871	1,5926	1,64689	,31694	1,4815	1,57798	,30368
Commitment_POST	2,1852	1,68790	,32484	2,2222	1,71718	,33047	2,0000	1,77591	,34177	2,1481	1,79108	,34469	1,8889	1,76141	,33898	1,7778	1,73944	,33475
Satisfaction_PRE	1,6296	1,24493	,23959	1,1481	1,40613	,27061	,8519	1,37851	,26529	,9259	1,59147	,30628	,7778	1,33973	,25783	,8889	1,60128	,30817
Satisfaction_POST	,8889	1,33973	,25783	,9630	1,42725	,27467	,8519	1,40613	,27061	,7037	1,23459	,23760	,7778	1,50214	,28909	,7037	1,38160	,26589
Curiosity_PRE	3,0741	1,49167	,28707	2,4444	1,47631	,28412	1,9259	1,73041	,33302	1,7778	1,71718	,33047	1,4815	1,67264	,32190	1,4444	1,64862	,31728
Curiosity_POST	1,8889	1,60128	,30817	1,4444	1,62512	,31276	1,5556	1,69464	,32613	1,2222	1,52753	,29397	1,1481	1,58609	,30524	1,3704	1,71303	,32967
Anxiety_PRE	,1481	,45605	,08777	,2963	,60858	,11712	,3704	,92604	,17822	,1481	,60152	,11576	,3704	1,00568	,19354	,4815	1,01414	,19517
Anxiety_POST	,4815	,97548	,18773	,4074	1,08342	,20850	,4444	,89156	,17158	,6296	1,14852	,22103	,5556	1,12090	,21572	1,0000	1,46760	,28244
Insecurity_PRE	,2222	,42366	,08153	,1852	,48334	,09302	,1481	,60152	,11576	,2222	,69798	,13433	,2593	,71213	,13705	,4815	1,08735	,20926
Insecurity_POST	,5185	1,08735	,20926	,1481	,45605	,08777	,2963	,82345	,15847	,3333	,87706	,16879	,4074	,97109	,18689	,5185	1,01414	,19517
Determination_PRE	1,0741	1,17427	,22599	1,1852	1,56984	,30212	1,1852	1,52005	,29253	1,1481	1,45981	,28094	1,3333	1,54422	,29719	1,2963	1,48880	,28652
Determination_POST	1,0370	1,40004	,26944	1,0741	1,49167	,28707	1,2222	1,57708	,30351	1,1852	1,46857	,28263	1,2222	1,50214	,28909	1,2963	1,72793	,33254
Nervousness_PRE	,1481	,36201	,06967	,2222	,69798	,13433	,2222	,64051	,12327	,2963	,95333	,18347	,3333	1,00000	,19245	,3704	1,00568	,19354
Nervousness_POST	,3333	1,00000	,19245	,3333	,87706	,16879	,3704	,92604	,17822	,7037	1,35348	,26048	,2593	,94432	,18173	,3704	1,00568	,19354
Concentration_PRE	1,8519	1,23113	,23693	1,7778	1,50214	,28909	1,5926	1,52566	,29361	1,3704	1,36292	,26229	1,2963	1,29540	,24930	1,4444	1,62512	,31276
Concentration_POST	1,8889	1,57708	,30351	1,6296	1,57256	,30264	1,5926	1,47438	,28374	1,7037	1,43620	,27640	1,3704	1,49739	,28817	1,3333	1,56893	,30194
Empathy_PRE	1,4444	1,55250	,29878	1,5556	1,67179	,32174	1,5926	1,73780	,33444	1,3704	1,66752	,32091	1,4815	1,76222	,33914	1,2593	1,58339	,30472
Empathy_POST	2,4815	1,80534	,34744	2,2963	1,72793	,33254	1,3704	1,73534	,33397	2,2593	1,97275	,37966	1,6296	1,82184	,35061	2,0370	1,76464	,33961
Disappointment_PRE	,0000	,00000	,00000	,6296	1,27545	,24546	,7407	1,43024	,27525	,6296	1,49739	,28817	1,0370	1,89090	,36390	,8148	1,59415	,30679
Disappointment_POST	,7037	1,29540	,24930	,6667	1,03775	,19971	,8148	1,66496	,32042	1,0370	1,69800	,32678	,7778	1,45002	,27906	1,0370	1,55617	,29948

Table 5-Statistics for paired samples results

In Table 6, on page 56, it is possible to see the differences for each emotion before reading the story, and after answering the task. For example, the change of intensity for "*interest*" (M: .18519; DS: 1,38777; t: 0,693; p: .494) is not significant statistically speaking, even though the rating decreased somewhat the task. However, there were significant differences reported between before and after the dilemma with the following emotions: *"worry"* (M:-1,22222; DS: 1,45002; t: -4,380; p: .000*), "happiness"* (M: 96296; DS: 1,31505; t: 3,805; p: .001), *"sadness"* (M: -,96296; DS: 1,25519; t: -3,986, p: ,000*), "anger"* (M: -,44444; DS: ,97402; t: -2,371; p: .025*), "distress*" (M: -,70370; DS: ,91209; t: -4,009; p: .000), *"frustration*" (M: -1,11111; DS: 1,28103; t: -4,507; p: .000*), "enthusiasm"* (M: ,85185; DS: 1,40613; t: 3,148; p: .004*), "pride"* (M: .66667; DS: 1,07417; t: 3,225; p: .003), *"peace"* (M: .66667; DS: 1,46760; t: 2,360; p: .026*), "satisfaction"* (M: .74074; DS: 1,28879; t: 2,987; p: .006), *"curiosity"* (M: 1,18519; DS: 1,96189; t: 3,139; p: .004), *"anxiety"* (M: -,33333; DS: ,73380; t: -2,360; p: .026*), "empathy"* (M: -1,03704; DS: 1,82886; t: -2,946; p: .007), and *"disappointment*" (M: -.70370; DS: 1,29540; t: -2,823; p: .009). In particular, reviewing again Table 5, the average intensity of the most negative emotions or feelings like "*worry", "sadness", "anger", "distress", "frustration", "anxiety",* and *"disappointmen*t" increased, even though the average answer regarding the intensity is always between 1 and 2 (very low or low). The most positive emotions or feelings like *"happiness", "enthusiasm", "pride", "satisfaction", "peace"*, and "*curiosity*", a significant decreased was reported, with the exception of "*empathy*", which instead increased. Also in these cases, despite the decrease, the intensity rate was low.

Similar data were obtained also with the second story, where negative emotions tend to increase in a significant way, in particular, *"worry"* (M: -,77778; DS: 1,71718; t: -2,354; p: .026), *"sadness"* (M: ,66667; DS: 1,03775; t: 3,338; p: .003*),* and *"distress"* (M: -,59259; DS: 1,15223; t: -2,672; p: .013), while positive emotions like "*happiness"* (M: ,66667; DS: 1,03775; t: 3,338; p: .003), *"enthusiasm*" (M: ,55556; DS: 1,12090; t: 2,575; p: .016), *"curiosity*" (M: 1; DS: 1,61722; t: 3,213; p: .003), and "*pride*" (M: ,44444; DS: 1,01274; t: 2,280; p: .031)

tend to decrease, with the exception of "*empathy*" (M: -,74074; DS: 1,25859; t: -3,058; p: .005) and "*commitment*" (M: -,44444; DS: ,97402; t: -2,371; p: .025). In the third story most data remained stable: the only emotion with a significant increase was "*insecurity*" (M: -,14815; DS: ,36201; t: -2,126; p: .043).

The data changed again in story four, which shows a similar trend obtained with the first and second stories: negative emotions tend to increase significantly (in particular, *"worry"* (M: -1,37037; DS: 1,54791; t: -4,600; p: .000)*, "sadness"* (M: -1,22222; DS: 1,36814; t: -4,642; p: .000), *"distress"* (M: -,81481; DS: 1,11068; t: -3,812; p: .001), *"anxiety"* (M: -,48148; DS: ,80242; t: -3,118; p: .004), *and "nervousness"* (M: -,40741; DS: ,84395; t: -2,508; p: .019), while positive emotions (like *"happiness"* (M: ,37037; DS: ,62929; t: 3,058; p: .005)*, "enthusiasm"* (M: ,59259; DS: ,88835; t: 3,466; p: .002), *"peace"* (M: ,40741; DS: ,84395; t: 2,508; p: .019), *"curiosity"* (M: ,55556; DS: 1,21950; t: 2,367; p: .026)*,* decreased, with the exception of "*empathy*" (M: -,88889; DS: 1,31071; t: -3,524; p: .002) and "*concentration*" (M: -,33333; DS: ,55470; t: -3,122; p: .004). However, the self-report regarding arousal with these emotions was low (around 1 and 2, or very low and low).

All data remained stable again with Story 5, with the exception of "*worry*" (M: -,51852; DS: ,97548; t: -2,762; p: .010), "*sadness*" (M: -,33333; DS: ,78446; t: -2,208; p: .036), and "*distress*" (M: -,59259; DS: 1,21716; t: -2,530; p: .018) that increased minimally.

Statistically significant changes were apparent in Story 6. As happened with the other dilemmas, there was an increase of negative emotions. In particular, "*worry*" (M: -1,07407; DS: 1,49167; t: -3,741; p: .001), "*sadness*" (M: -,77778; DS: 1,25064; t: -3,232; p: .003), "*distress*" (M: -1,03704; DS: 1,34397; t: -4,009; p: .000), "*fear*" (M: -,51852; DS: 1,25178; t: -2,152; p: .041), and "*anxiety*" (M: -,51852; DS: 1,18874; t: -2,267; p: .032). Yet, there was a significant increase of "*empathy*" (M: -,77778; DS: 1,50214; t:-2,690; p: .012).

	Story 1				Story 2				Story 3				Story 4				Story 5				Story 6			
	M	DS.	t	Sig.	M	DS.	t	Sig.	M	DS.	t	Sig	M	DS	t	Sig.	M	DS.	T	Sig.	M	DS	t	Sig
Interest	0,18519	1,38777	0,693	0,494	,07407	1,03500	,372	,713	,14815	,76980	1,000	,327	-,03704	,93978	-,205	,839	-,29630	,77533	-1,986	,058	-,44444	1,12090	-2,060	,057
Worry	-1,22222	1,45002	-4,380	,000	-,77778	1,71718	-2,354	,026	-,18519	1,59415	-,604	,551	-1,37037	1,54791	-4,600	,000	-,51852	,97548	-2,762	,010	-1,07407	1,49167	-3,741	,001
Happiness	,96296	1,31505	3,805	,001	,66667	1,03775	3,338	,003	,22222	,64051	1,803	,083	,37037	,62929	3,058	,005	,03704	,51750	,372	,713	,07407	,38490	1,000	,327
Sadness	-,96296	1,25519	-3,986	,000	-,92593	1,32798	-3,623	,001	,11111	1,15470	,500	,621	-1,22222	1,36814	-4,642	,000	-,33333	,78446	-2,208	,036	-,77778	1,25064	-3,232	,003
Anger	-,44444	,97402	-2,371	,025	-,48148	1,64948	-1,517	,141	,00000	1,35873	,000	1,000	,00000	1,17670	,000	1,000	,11111	,84732	,681	,502	-,03704	1,37229	-,140	,890
Distress	-,70370	,91209	-4,009	,000	-,59259	1,15223	-2,672	,013	-,22222	1,28103	-,901	,376	-,81481	1,11068	-3,812	,001	-,59259	1,21716	-2,530	,018	-1,03704	1,34397	-4,009	,000
Frustration	-1,11111	1,28103	-4,507	,000	-,37037	1,82184	-1,056	,301	,00000	1,61722	,000	1,000	-,37037	1,49739	-1,285	,210	-,03704	1,05544	-,182	,857	-,11111	1,55250	-,372	,713
Fear	-,37037	1,00568	-1,914	,067	-,07407	,61556	-,625	,537	-,18519	,55726	-1,727	,096	-,33333	,87706	-1,975	,059	-,25926	,76423	-1,763	,090	-,51852	1,25178	-2,152	,041
Regret	-,33333	,96077	-1,803	,083	-,18519	,96225	-1,000	,327	-,11111	1,08604	-,532	,600	-,25926	1,09519	-1,230	,230	-,11111	,97402	-,593	,558	-,14815	1,19948	-,642	,527
Enthusiasm	,85185	1,40613	3,148	,004	,55556	1,12090	2,575	,016	,14815	,81824	,941	,355	,59259	,88835	3,466	,002	,22222	,64051	1,803	,083	,03704	,89792	,214	,832
Pride	,66667	1,07417	3,225	,003	,44444	1,01274	2,280	,031	,18519	,48334	1,991	,067	,00000	,83205	,000	1,000	,22222	,57735	2,000	,056	-,07407	,38490	-1,000	,327
Peace	,66667	1,46760	2,360	,026	,44444	1,36814	1,688	,103	,11111	,93370	,618	,542	,40741	,84395	2,508	,019	,11111	,93370	,618	,542	-,25926	,85901	-1,568	,129
Relief	-,07407	,91676	-,420	,678	,00000	,48038	,000	1,000	-,03704	,58714	-,328	,746	-,03704	,70610	-,273	,787	,07407	,61556	,625	,537	,07407	,47442	,811	,425
Commitment	,18519	1,41522	,680	,503	-,44444	,97402	-2,371	,025	,07407	,78082	,493	,626	-,22222	1,05003	-1,100	,282	-,29630	1,13730	-1,354	,187	-,29630	1,10296	-1,396	,175
Satisfaction	,74074	1,28879	2,987	,006	,18519	,87868	1,095	,284	,00000	,78446	,000	1,000	,22222	1,08604	1,063	,297	,00000	1,03775	,000	1,000	,18519	,68146	1,412	,170
Curiosity	1,18519	1,96189	3,139	,004	1,00000	1,61722	3,213	,003	,37037	1,14852	1,676	,106	,55556	1,21950	2,367	,026	,33333	1,00000	1,732	,095	,07407	,67516	,570	,574
Anxiety	-,33333	,73380	-2,360	,026	-,11111	,93370	-,618	,542	-,07407	,54954	-,700	,490	-,48148	,80242	-3,118	,004	-,18519	,96225	-1,000	,327	-,51852	1,18874	-2,267	,032
Insecurity	-,29630	1,06752	-1,442	,161	,03704	,43690	,440	,663	-,14815	,36201	-2,126	,043	-,11111	,50637	-1,140	,265	-,14815	,81824	-,941	,355	-,03704	,85402	-,225	,823
Determination	,03704	1,37229	,140	,890	,11111	,80064	,721	,477	-,03704	,70610	-,273	,787	-,03704	,43690	-,440	,663	,11111	1,01274	,570	,574	,00000	1,14354	,000	1,000
Nervousness	-,18519	1,03912	-,926	,363	-,11111	,57735	-1,000	,327	-,14815	,66238	-1,162	,256	-,40741	,84395	-2,508	,019	,07407	,91676	,420	,678	,00000	,73380	,000	1,000
Concentration	-,03704	1,19233	-,161	,873	,14815	,81824	,941	,355	,00000	,87706	,000	1,000	-,33333	,55470	-3,122	,004	-,07407	1,35663	-,284	,779	,11111	,84732	,681	,502
Empathy	-1,03704	1,82886	-2,946	,007	-,74074	1,25859	-3,058	,005	,22222	1,25064	,923	,364	-,88889	1,31071	-3,524	,002	-,14815	1,56165	-,493	,626	-,77778	1,50214	-2,690	,012
Disappointment	-,70370	1,29540	-2,823	,009	-,03704	1,22416	-,157	,876	-,07407	1,29870	-,296	,769	-,40741	1,62337	-1,304	,204	,25926	1,81007	,744	,463	-,22222	,89156	-1,295	,207

Table 6- Test T for paired sample result

Finally, a comparison was made between the emotions or feelings experienced before starting the task and at the end, after the last dilemma. In this case it is possible to notice the major changes between the beginning moment and the end. In general, these data confirm that negative emotions increased in a significant way, while the positive emotions decreased. Given that the collection of this data was before and after the task, the statistical significance is higher. The emotions that increased are "*worry*" (M: -1,29630; DS: 1,72793; t: -3,898; p: .001), "*sadness*" (M: -,81481; DS: 1,33119; t: -3,181; p: .004), "*anger*" (M: -1,37037; DS: 1,57256; t: -4,528; p: .000), "*distress*" (M: -1,62963; 1,54791; t: -5,470; p: .000), "*frustration*" (M: -1,77778; DS: 1,69464; t: -5,451; p: .000), "*regret*" (M: -,81481; DS: 1,49453; t: -2,833, p: .009), and "*disappointment*" (M: -1,03704; DS: 1,55617; t: -3,463; p: .002). The emotions or feelings that instead decreased included "*interest*" (M: ,85185; DS: 1,74761; t: 2,533; p: .018), "*happiness*" (M: 1,29630; DS: 1, 53960; t: 4,375; p: .000), "*enthusiasm*" (M: 1,03704; DS: 1m55617; t: 3,463; p: .002), "*peace*", (M: ,96296; DS: 1,58069; t: 3,166; p: .004), "*satisfaction*" (M: ,92593; DS: 1m26873; t: 3,792; p: .001), "*curiosity*" (M: M: 1,70370; DS: 2,18059; t: 4,060; p: .000), and "*concentration*" (M: -1,03704; DS: 1,31179; t: 2,054; p: .050).

- ***Did the Emotions Influence the Probability of Choosing an Option?***

In order to verify if the emotion influenced the probability of choosing a particular option, a Logistical Regression analysis was conducted. As described in Table 7, it was found that emotions had a significant dependent relationship with the choices made in Stories 1, 3, 5, and 6 ($p < .05$), but not in story 2 or 4. Thus, emotions or feelings influenced the probability of choosing an option only with specific dilemmas.

	B	E.S.	Wald	Sig.	Exp(B)
Story 1	1,482	,495	8,943	,003	4,400
Story 2	,693	,408	2,883	,090	2,000
Story 3	2,079	,612	11,531	,001	8,000
Story 4	,223	,387	,332	,565	1,250
Story 5	1,050	,439	5,715	,017	2,857
Story 6	,865	,421	4,212	,040	2,375

Table 7 -Results of regression analysis on the impact of emotions on choices made

Story 1

While exploring the influence of emotions on choices made, the emotion of "*anger*" before starting Story 1 turns out to be statistically significant in the regression analysis (Anger_PRE_1 p< 0.5; B= -2,639; ES = 1,371) and may have influenced the probability of choosing an option (Table 10). It is not known why some subjects were angry and, looking again at table 5, the average of the item Anger_PRE_1 is around 2 (low). However, this data shows that, despite the low intensity, it was probably sufficient to influence the choice of some subjects. Furthermore, it is interesting to note how a pre-existing emotion, feeling, or mood may have played a role as well.

		Chi-square	Df	Sig.
Step 1	Step	3,971	1	,046
	Block	3,971	1	,046
	Model	3,971	1	,046

Table 8- Test omnibus of model coefficients

Observed			Predicted		
			Story_1		Correct
			Utilitarian	Deontological	Percentage
Step 1	Story_1	Utilitarian	2	3	40,0
		Deontological	1	21	95,5

Overall Percentage		85,2

a. the cut value is .500

Table 9 – Classification table

		B	E.S.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Anger_PRE_1**	-2,639	1,371	4,068	1	,044	,055
	Costant	1,946	,617	9,940	1	,002	7,000

a. Variable entered to step 1: Anger_PRE_1.

Table 10- Variables in the equation

Story 3

With Story 3, the emotions that were found to be significant were "*nervousness*" (B: -1,623; ES: 844; p: < .05), "*fear*" (B: -2,105; ES: 1,359; p: < .05) and "*anxiety*" (B: -1,689; ES: 878; p< .05) (Table 13) and may have influenced the probability of electing one option. All emotions were reported immediately after the answer was given, thus they were probably experienced while completing the task.

			Chi-square	df	Sig.
Step 1	**Nervousness_post_3**	Step	7,107	1	,008
		Block	7,107	1	,008
		Model	7,107	1	,008
Step 1	**Fear_post_3**	Step	9,394	1	,002
		Block	9,394	1	,002
		Model	9,394	1	,002
Step 1	**Anxiety_post_3**	Step	4,375	1	,036
		Block	4,375	1	,036
		Model	4,375	1	,036

Table 14- Test omnibus of model coefficients

		Predicted		
		Story_3		
	Observed	**Utilitarian**	**Deontological**	**Correct Percentage**

Nervousness_post_3	Utilitarian	1	2	33,3
	Deontological	0	24	100,0
Overall Percentage				92,6
Fear_post_3	Utilitarian	2	1	66,7
	Deontological	0	24	100,0
Overall Percentage				96,3
Anxiety_post_3	Utilitarian	1	2	33,3
	Deontological	0	24	100,0
Overall Percentage				92,6

a. the cut value is .500

Table 12 – Classification table

		B	ES	Wald	Sig.	Exp(B)
Step 1ª	**Nervousness_POST_3**	-1,623	,844	3,697	,045	,197
	Costant	3,280	1,069	9,418	,002	26,577
Step 1ª	**Fear_POST_3**	-2,105	1,359	3,399	,048	,082
	Costant	3,310	1,082	9,352	,002	27,385
Step 1ª	**Anxiety_POST_3**	-1,689	,878	3,679	,049	,304
	Costant	2,973	,919	10,458	,001	19,548

a. Variable entered to step 1: Nervousness_POST_3; Fear_POST_3, Anxiety_POST_3.

Table 13- Variables in the equation

Story 5

In Story 5, the emotion of significance was "*worry*" (B: -1,124; ES: ,519; p<.05), reported immediately after having completed the task (thus, this emotion was probably experienced also during the reasoning phase) (Table 16).

		Chi-square	df	Sig.
Step 1	Step	6,591	1	,037
	Block	6,591	1	,037
	Model	6,591	1	,037

Table 14- Test omnibus of model coefficients

Observed			Predicted		
			Story_5		Correct
			Utilitarian	Deontological	Percentage
Passo 1	**Worry_Post_5**	Utilitarian	3	4	42,9
		Deontological	1	19	95,0
Overall percentage					81,5

a. The cut values is ,500

Table 15 – Classification table

		B	E.S.	Wald	df	Sig.	Exp(B)
Passo 1[a]	**Worry_POST_5**	-1,124	,519	4,683	1	,030	,325
	Costant	2,012	,710	8,033	1	,005	7,478

a. Variable entered to step 1: Worry_POST_5.

Table 16- Variables in the equation

Story 6

In the final story, the emotions or feelings of "*worry*" (B: -,829; ES: ,370) and "*distress*" (B: 1,450; ES: 764) were found to be significant (p<.05). This data is interesting because the variables are both significant immediately after having completed the task, while the variable "*distress*" is also significant before have read the last story (B: -,932; ES: 3,835), suggesting that they may have played an important role during the reasoning and decision-making process.

		Chi-square	df	Sig.
Step 1 **Worry**	Step	7,414	2	,025
	Block	7,414	2	,025
	Model	7,414	2	,025
Step 1 **Distress**	Step	6,492	2	,039
	Block	6,492	2	,039
	Model	6,492	2	,039

Table 17- Test omnibus of model coefficients

	Observed		Predicted		
			Story_6		Correct
			Utilitarian	Deontological	Percentage
Step 1a **Worry**	Story_6	Utilitarian	4	4	50,0
		Deontological	1	18	94,7
	Overall Percentage				81,5
Step1a **Distress**	Story_6	Utilitarian	5	3	62,5
		Deontological	2	17	89,5
	Overall Percentage				81,5

a. The cut value is .500

Table 18 – Classification table

		B	E.S.	Wald	df	Sig.	Exp (B)
Passo 1[a]	**Distress_PRE_6**	-,932	,476	3,835		,046	,394
	Distress_POST_6	1,450	,764	3,600	1	,049	4,262
	Costant	1,805	,825	4,792	1	,029	6,079
	Worry_PRE_6	1,013	,595	2,900	1	,089	2,755
Passo 1[a]	**Worry_POST_6**	-,829	,370	5,003	1	,025	,437
	Costant	1,820	,718	6,427	1	,011	6,174

a. Variable entered to step 1 : Distress_PRE_6, Distress_POST_6, Worry_PRE_6, Worry_POST_6.

Table 19- Variables in the equation

- ***Other Variables Considered: Age, Gender, Education, and Years of Experience as Ethicist.***

In order to verify if other variables might have influenced the subject's reasoning, other regression analyses were conducted on age, gender, education, and years of experience as an ethicist. As it is possible to see in the next table (Table 20), only in story 2 and 4 was there a significant correlation with the choice made. In particular, the "*education*" variable is significant in both cases ($p < .05$). It is interesting because stories 2 and 4 are those with a higher percentage of utilitarian answers and no correlation with any emotion or feeling.

Test omnibus dei coefficienti del modello

		Chi-square	df	Sig.
Story 1	Step	,508	4	,973
	Block	,508	4	,973
	Model	,508	4	,973
Story 2	Step	11,443	4	,022
	Block	11,443	4	,022
	Model	11,443	4	,022
Story 3	Step	6,093	4	,192
	Block	6,093	4	,192
	Model	6,093	4	,192
Story 4	Step	9,438	4	,050
	Block	9,438	4	,050
	Model	9,438	4	,169
Story 5	Step	3,448	4	,486
	Block	3,448	4	,486
	Model	3,448	4	,486
Story 6	Step	5,401	4	,249
	Block	5,401	4	,249
	Model	5,401	4	,249

Table 20- Test omnibus of model coefficients

	Observed		Predicted		
			Story		Percentage
			Utilitarian	Deontological	Correct
Passo 1	**Story_1**	Utilitarian	0	5	,0
		Deontological	0	22	100,0
	Overall percentage				81,5
Passo 1	**Story_2**	Utilitarian	4	5	44,4
		Deontological	1	17	94,4
	Overall percentage				77,8
Passo 1	**Story_3**	Utilitarian	1	2	33,3
		Deontological	0	24	100,0
	Overall percentage				92,6
Passo 1	**Story_4**	Utilitarian	7	5	58,3
		Deontological	3	12	80,0
	Overall percentage				70,4
Passo 1	**Story_5**	Utilitarian	1	6	14,3
		Deontological	1	19	95,0
	Overall percentage				74,1
Passo 1	**Story_6**	Utilitarian	2	6	25,0
		Deontological	2	17	89,5
	Overall percentage				70,4

a. The cut value is .500

Table 21 – Classification table

Variable		**B**	**E.S.**	**Wald**	**Sig.**	**Exp(B)**
Step 1a **Story 1**	Age_group	-,430	1,384	,097	,756	,651
	Gender	,626	1,209	,268	,604	1,870
	Experience	,469	,782	,359	,549	1,598
	Education	,065	,640	,010	,919	1,067
Step 1a **Story 2**	Age_group	,197	1,665	,014	,906	1,218
	Gender	2,601	1,431	3,307	,069	13,483
	Experience	-,805	,993	,657	,418	,447
	Education	-1,879	,855	4,828	,028	,153
Step 1a **Story 3**[a]	Age_group	-2,869	1,980	2,098	,147	,057
	Gender	2,831	2,448	1,337	,248	16,955
	Experience	2,751	1,450	3,597	,068	15,651
	Education	-,276	,894	,095	,758	,759

Step 1a **Story 4**	Age_group	-1,454	1,363	1,138	,286	,234
	Gender	,491	1,040	,223	,637	1,635
	Experience	-,054	,712	,006	,939	,947
	Education	-1,224	,601	4,151	,042	,294
Step 1a **Story 5**	Age_group	-1,462	1,551	,889	,346	,232
	Gender	,753	1,083	,483	,487	2,122
	Experience	-,279	,754	,137	,711	,756
	Education	-,316	,596	,281	,596	,729
Step 1a **Story 6**	Age_group	1,495	1,379	1,174	,279	4,457
	Gender	-2,291	1,380	2,756	,097	,101
	Experience	-,119	,705	,028	,866	,888
	Education	,775	,646	1,440	,230	2,170

a. Variable entered to step 1 : DIstress_PRE_6, Distress_POST_6, Worry_PRE_6, Worry_POST_6.

Table 22- Variables in the equation

Given that the variable of "*education*" was found to be significant in stories 2 and 4, another analysis was conducted to deepen understanding of this datum. The goal was to understand if there may be a correlation between the professional field of study and the answer given. In order to do that, subjects were divided into two groups: the first contained CECs with major studies in the field of philosophy, bioethics, theology, and similar; while the second group contained those with medical or nursing studies. However, the average of the deontological answers given by the two groups is identical (61%), showing that there are no differences.

- ***Discussion of Results***

CECs gave more deontological answers than utilitarian to all the stories or dilemmas. This data may lead one to think that emotions had a significant impact on decision making. Indeed, there are several emotions, especially those perceived as negative, that increased after reading the story; for example,

"*sadness*", "*anger*", "*worry*", "*distress*", etc. However, data collected with respect to the arousal of the emotions, suggest that subjects experienced a low level of intensity. Despite this, the regression analyses conducted on each story indicate that, in some dilemmas, the emotions or feelings influenced the probability of choosing an option. Given that the data is significant only in the stories with over 70% deontological answers, it is logical to maintain that for these stories the emotions or feelings had a probable role in electing this option.

The positive significance of stories 1, 3, 5, and 6 is also correlated with the percentage of deontological answers; that is, the higher is the significance of a story, the greater is the percentage of deontological answers for that story. In particular, the emotions founded to be significant, and that may have influenced the reasoning, are "*anger*", "*nervousness*", "*fear*", "*anxiety*", "*worry*" and "*distress*". This data is not surprising, given that negative emotions are commonly experienced during moral dilemmas (Avramova and Inbar, 2013) and they have been associated with a "deontological bias" (Szekely and Miu, 2015). Indeed, on the other hand, the stories with no significant data are those with more utilitarian answers (Story 2 and 4). In particular, Story 4, which had the least significant data, is also the story with the highest percentage of utilitarian responses.

In Story 1, *anger* is the emotion that turns out to be significant. Given that 81.5% of subjects selected the deontological option, it may have had a role in electing this option. Other studies show, indeed, that incidental anger is associated with a greater willingness to harm or sacrifice a life (e.g. Ugazio et al., 2012; Nuñez et al., 2015; Baron et al., 2018). Angry individuals are also more likely to stereotype targets, make more heuristic-based judgments, and show automatic prejudice toward an out-group, in comparison to sad or neutral individuals (Bodenhausen, Kramer, and Susser, 1994; Bodenhausen, Sheppard, and Kramer, 1994; DeSteno, et al., 2004). However, the emotion of anger is also commonly thought to increase action tendencies and then believed, for this reason, to be responsible for utilitarian choices (Russell, 2003).

Regarding the emotion of *fear*, found significant in Story 3, literature states that it serves the function of protection, escaping from a situation perceived as threatening (Seitz, Lord, and Taylor, 2007). Thus, this emotion may lead people to feel as if they have no choice or a deontological approach. In addition, many neuronal circuits connected to the emotions of fear and anxiety overlap with a network of brain regions, suggesting that fear may work similarly to anxiety from a neurocognitive perspective (Tovote et al., 2015). *Anxiety*, together with *nervousness*, was significant in Story 3 as well. According to the American Psychological Association Dictionary (APA, 2020), nervousness is a "*transient emotional state of anxious apprehension*" or an "*excitable, highly strung or easily agitated disposition*". There are no studies to date that tested the influence of feeling nervous on moral reasoning, yet it can be hypothesized that it may play a similar role as anxiety and fear. In general, anxiety traits have been associated with impaired cognitive functioning, including the decision-making process and control of emotional stimuli or arousal (Hartley and Phelps, 2012). In the study by De Visser and colleagues (2010), they investigated the relationship between anxiety traits and complex decision-making in healthy individuals, using gender as a discriminative factor. Results suggest that both low and high anxiety traits in groups of men had altered decision-making compared to medium anxiety individuals, whereas only women with high anxiety traits performed poorly. Therefore, it can be maintained that fear, anxiety and nervousness may have influenced participants to elect a deontological answer.

A similar hypothesis can be considered regarding the state of being *worried*, the variable that turned out to be significant in both Story 5 and 6. Worry is another feeling often correlated with anxiety, rumination and inaction. Therefore, it can be hypothesized that apprehension for something may promote a deontological preference as well. In addition to concern, moral scenarios usually induce stress experiences (Kälvemark et al., 2004). *Distress* is, indeed, the variable that was found significant in Story 6. Many studies investigated moral distress experienced by health care workers (e.g. Kälvemark

et al., 2004; McCarthy and Deady, 2008; Greason, 2020), while others focused on the stress effect on morality abilities, finding that it may promote deontological judgments (e.g. Starcke et al., 2012; Youssef et al., 2012; Kossowska et al., 2016; Zhang et al., 2018). However, it is necessary to make a distinction among the different levels of stress (low, acute, and chronic) because it has also been demonstrated that the right amount of stress is beneficial per se for the organism (McEwen, 2019). A higher level of stress tends instead to weaken individuals' cognitive control (Hermans et al., 2017), diminishing the confidence in making an optimal decision, and reducing the inclination to act (Gawronski et al., 2017). Chronic stress, moreover, interferes with the prefrontal cortex, a brain region implicated in planning complex cognitive behavior, personality expression, decision making, and moderating social behavior, leading towards more habitual and intuitive responses (e.g., Arnsten, 2009; Dias-Ferreira et al., 2009).

Another element supporting the hypothesis that emotions or feelings may have induced the participants of this study to select the deontological option is given by the initial request with the task *"to elect the first good solution that comes to mind".* According to studies by Greene (2001; 2004), subjects who respond more quickly to the dilemmas, also make more deontological judgments. Indeed, pushing subjects to respond quickly and intuitively to moral dilemmas leads to an increase in deontological judgments (Suter and Hertwig, 2001). This result has been interpreted in the past as confirmation of Greene's assumption that deontological judgments are based on emotions, while utilitarian judgments on deliberate reasoning. Thus, the results obtained in this study may confirm Greene's hypothesis as well.

Further analyses conducted on this sample suggest that no correlation was found between the answer given and gender, years of work, age or level of education achieved, except for Stories 2 and 4, where the variable "*education*" was significant. Since these two dilemmas are the ones with the highest percentage of utilitarian answers, in comparison to the others, it may be

possible that the years of education, the field of studies, or other extra-formative experiences, may have promoted the utilitarian choice.

However, a further deepen analysis to test this hypothesis regarding the field of professional education, did not find any difference between subjects and the answer given. In fact, during the educational development of a student, infinite factors may contribute or play a role, which can neither be quantified nor measured. Therefore, whatever influence a person's training has had on his reasoning skills or moral orientations can only be speculated.

❖ Chapter IV

➢ *Conclusions*

In the present study, the most salient steps in the birth of bioethics and, in particular, clinical/medical ethics were initially drawn. Subsequently, the main moral dilemmas and studies that accompanied their development were illustrated, as well as the influence of social norms and principles on decision-making behavior. The development of the clinical ethical consultant was outlined in-depth and, in particular, how this professional figure was established in the U.S.A. and its mission within a hospital. Furthermore, differences existing between the role of ethical consultation between an Anglo-Saxon-American and European context were empathized. In fact, their very different cultural and social backgrounds have a strong impact on how clinical ethics consultants face an ethical dilemma given that the principles, values and norms that guide their behavior are drastically different. Finally, the primary knowledge and skills that these particular specialists should possess were described to give a clear vision of this professional figure, even to the less expert reader. This role is indeed not yet widespread and known across Europe, nor exists in every European country.

In the second chapter, the main theories concerning moral reasoning were discussed, with particular reference to the deontological and utilitarian model and the Greene's dualistic theory. In summary, according to the deontological approach, the moral principles that require or prohibit certain behaviors must always be respected (Troyer, 2003), while, according to the utilitarian approach, the goodness of an action should be judged by referring not to the principles but the consequences (Mill, 1861). In the last twenty years, Greene and his collaborators (2001; 2005; 2008) analyzed these two approaches from a cognitive perspective and proposed that the two moral inclinations underlying moral judgment are guided by two distinct and independent processes. They concluded that deontological judgments are

driven by automatic fast emotional responses, while utilitarian judgments are led by controlled slow cognitive processes based on the cost-benefits analysis. This hypothesis was confirmed later by many neuroscientific studies (Greene et al., 2004; 2005; 2007). For this reason, in the second chapter, the literature regarding the role of emotions on moral reasoning and their possible influence on the decision-making process were examined. However, although other evidence seems to agree with Greene's dual-process model (e.g. Moore et al., 2008; Suter and Hertwig, 2001; Zhang et al., 2017b), which is considered one of the most conspicuous and famous theories in this field, moral dilemma research cannot determine whether the obtained effects reflect differences in the strength of a single moral inclination, or in the joint operation of two distinct predispositions (Conway and Gawronski, 2013).

Therefore, the attention of authors focused in favor of the role of the individual differences in emotion regulation (e.g. Szekely and Miu, 2015; Lee and Gino, 2015; Zhang et al., 2017a, 2017b). These studies maintain, in fact, that different individuals might experience a similar emotion about the same situation but the degree to which this emotion impacts their judgments might vary substantially based on their abilities to control their emotional life. In any case, literature in this field agrees in stating that emotions have an influence on moral reasoning and decision-making processes. In addition, according to the "affect-as-information" theory, which suggests that individuals attend to their affects as a source of information to judge and make decisions, even feelings or moods, as well the weather or physical sensations play a role (Schwarz and Clore, 1983; Schwartz, 2012). For instance, Hirshleifer and Shumway (2003) noticed a consistent influence of the weather on stock market returns in 26 countries: during sunny days the market that hosts the country's major stock exchange is more likely to increase positively. This curious fact probably happens because the upbeat mood associated with good weather makes investors feel more optimistic about the economic future.

Thus, in light of the findings summarized here, the ongoing development and implementation of clinical ethics consultation services worldwide, and,

especially, in light of the fundamental role of these specialists in making decisions regarding the health and life of patients, it is important to understand how the cognitive and emotional processes are utilized during the moral reasoning and the decision making process. Therefore, for this reason, this research project investigated the emotions and feelings that CECs experience during case deliberation and if they play a role in moral reasoning and during the decision making process.

Based on the semistructured interview mailed to American and European consultants, results suggest that subjects experienced both negative and positive emotions or feelings during the discussion and the deliberation of the case freely selected. However, the majority (70%) acknowledge that they experienced significant sadness, anger or frustration. The same emotions or feelings were also experienced after the deliberation, at the time of the interview, pointing out the persistent characteristic of these negative memories. Indeed, almost half of the consultants felt regret regarding the way they faced the situation, while someone would even change his final decision. It is as if, once consultants acquired a certain mental distance from the case, they had assimilated the necessary mental clarity to re-evaluate their past actions with a different approach. This data opens a crucial reflection about how this negativity perceived and experienced during deliberation could increase case-by-case in the consultant's mind and/or body leading him or her to undergo a higher level of stress and, therefore, to the development or worsening of stress-related conditions (included but not limited to: addictions disorders, psychosomatic symptoms, low attention/concentration, depression, anxiety, etc.). Conditions that, in conclusion, could widely disrupt their reasoning and decision-making skills.

In the second part of this pilot project, consultants were asked to answer six moral dilemmas and to indicate their emotional experience. Furthermore, although the task was completed by a sample of subjects with many years of experience as ethicists, the logistic regression showed that some emotions or feelings played a role in selecting an option, especially anger (in the first

dilemma), fear, anxiety, and nervousness (in the third dilemma), worry (in the fifth dilemma) and distress and worry again, in the last dilemma. In particular, since the main response given for all dilemmas is the deontological, it is assumed that emotions may have influenced choosing this option. In addition, the greater the statistical significance for a story, the higher is the percentage of deontological answers for that story. Among the other variables considered in the analysis (e.g. gender, years of work, age and level of education achieved), these were not found to correlate with the answer, except for the Story 2 and 4. In these two stories, which are those with the higher percentage of utilitarian answers and no emotions related significance compared to the others, the variable "education" was significant.

- ***Limits and Applications of the Study***

The data from this study is curious for different reasons. First, it is the only study to date, that explores the role of emotions in moral reasoning with individuals who "solve" moral dilemma for their profession. In addition, it has been shown that participants were influenced in some cases by their emotions or feelings. The interesting aspect is that this data emerged although CECs answered by reviewing standard written dilemmas, which is very different from facing a real case in real time. In the second scenario, in fact, the emotional arousal is much stronger. This may lead one to think that, in reality, consultants are more impacted by their emotions or feelings, and that this may deeply impact their reasoning and/or choices. Indeed, the second fascinating aspect of the results of this study is that this effect occurred in absence of other external variables that are present during every day work life.

The main limit of this pilot study is the limited number of participants and the absence of a control group in order to compare results. (Unfortunately, it was not possible to end the second study with a control group because of the pandemic emergency of Covid-19). Thus, data cannot be generalized. However, in this pilot study, a good attempt has been made to reach a reliable result

eliminating or reducing the external variables that influence the reasoning and decision-making process -such as the impact of discussing the case with the team or an ethics commission. Other strategies used for this purpose included: avoiding classical well-known dilemmas or standard clinical cases, and later checking statistically if gender, age, work experience, and education training had an impact.

However, despite the attempts made in this pilot study, another limit is that the laboratory setting does not permit results to reflect authentic in the moment decision-making. Indeed, reading and answering a written dilemma is very different from facing it in the work environment. Thus, further investigations should try to eliminate this gap. For example, a suggestion could be to implement a study in a hospital room with actors that play the role of the patient and the family members, and immediately after submitting the survey asking about the emotions experienced while selecting a choice. This kind of setting already exists in hospitals, and it is used by students to learn medical techniques, or by physicians to gain confidence and familiarity with medical practices before a complicated surgery. Exceptionally, it has been used also during summer 2019 during the conference entitled *"Practicing end-of-life conversations: simulated practice of difficult conversations in the adult, pediatric and neonatal health care setting"* organized by the Children's Hospital of Minnesota, to help future CECs to gain confidence with difficult situations and dialogues that arise when facing an ethical case within a hospital. Thus, even though it may seem complicated to organize, the option of using an extremely realistic setting could be followed for research studies as well.

As seen in the previous chapters, decision-making is a complex non-linear process that is affected by several factors, such as, personal knowledge or background, past experiences, individual differences and, of course, emotions, moods, and stress. Indeed, the variable *distress* turned out to be significant in the last story. Thus, it is suggested that future research projects deepen understanding of how distress affects the moral reasoning and decision making abilities of CECs. Monitoring, response time and biological indexes (such as

cortisol level) should be included as well to provide a more comprehensive understanding of this relationship.

In conclusion, further research in this field is highly very recommended because an individual's life is potentially in the hands of specialists who may make "incorrect" decisions for their health (especially when patients cannot express their desires). Indeed, in certain countries, the ethics consultant is often the one who has the last word on a medical case. Therefore, in light of this critical issue and what has been discussed so far, CECs should carefully consider their emotions during the deliberation process, to avoid disrupting their reasoning. Yet at the same time, they should remember that, similar to stress (McEwen, 2019), an adequate level of arousal is positive in itself[5]. For this reason, programs that create new clinical ethics consultants should also put their attention on how emotions may impact the reasoning and decision-making process.

Finally, it is suggested that educational training utilize this information to improve the quality of life of consultants and, consequently, a positive outcome for patients. For instance, CECs' would benefit from seminars and theoretical classes on this topic, as well practical exercises aim to improve their skills of listening and managing their emotions. Future clinical ethics consultants could learn relaxation techniques, such as autogenic training or mindfulness, in order to relax their mind during stressful situations or deliberation meetings. Indeed, given that several studies show the positive effect of these practices as enhancing cognitive functions and general well-being, as well as decreasing anxiety and depressive symptoms (for a review: Raffone and Srinivasan, 2017), the attention of researchers moved toward exploring in detail the role of a "mindful mind" in moral decision making and ethical behavior. For example, Ruedy and Schweitzer (2010) found that individuals are more likely to act in an

[5] There is also to say, that in the experimental phase of this study some consultants reported low level of emotional arousal. This may have happened because the dilemma was a hypothetical written scenario, even though pretty realistic; or participants knew to be tested; or because they were not completely aware of their emotional life (this last hypothesis is also supported by the fact that during the interviews, describing a real case met at work, someone said to have not felt anything).

ethical way when they practice mindfulness. In addition, Shapiro, Jazaieri and Goldin (2012) were the first to examine the effect of mindfulness-based stress reduction training on moral reasoning and ethical decision making. In their study, subjects still show improvements in their reasoning and decision-making skills at a two-month follow-up. After this study, many other empirical researchers obtained similar results (e.g. Pandley et al., 2017; Wan et al., 2020) or investigated this relationship from a neurocognitive perspective (e.g. Pless et al., 2017; Sevinc and Lazar, 2019). Therefore, in conclusion, in light of this further evidence, it is also suggested that they promote at their ethical department debriefing sessions after every meeting or case discussion, or on daily basis, and to learn some quick mindful exercise as well.

❖ Appendix

➢ Clinical Ethics Consultants Interview

Dear Mr. or Ms.,

my name is Margherita Dahò and I am a Ph.D. student of University of Messina, Italy. My mentor is prof. Amelia Gangemi.

We are writing you to invite you to take part to our study.

The aim of the project, conducted in partnership with the University of Minnesota, U.S.A., is to explore the moral reasoning of Clinical Ethics Consultants in order to understand how they face and solve medical ethical dilemmas.

In light of the ongoing development and implementation of the Clinical Ethical Departments and committees, it is important to understand how the bioethics knowledge, and the cognitive and emotional processes are utilized by those who do clinical ethics consultations during the decision-making process. We so also expect to be able to better comprehend what issues and challenges they must deal with.

If you would like to participate in this pilot study, you should answer to this brief written interview. It takes you around 10-15 minutes, and you should answer following your point of view and feelings even if you are the member of a team or you usually do not make the final decision. The survey is in English and it is anonymous in order to protect your privacy.

Your contribution is important and we really appreciate it!

Please, do not hesitate to contact us if you have any questions.

Sincerely,

Margherita Dahò and Amelia Gangemi

For assistance write to Margherita Dahò mdaho@unime.it

University of Messina, Italy

Participation consent

- Do you agree to take part to this study? □ YES □ NO

Demographics questions

- Your age _____
- Your gender _____
- What country of USA or EU do you work in? _____
- What is your highest level of education? (specific the major field) _____
- How long have you been working as Clinical Ethics Consultant in any healthcare organization?

  □ 1-5 years

  □ 5-10 years

  □ over 10 years

Interview questions

1) Could you describe briefly an ethical clinical case that challenged you? (Please, include your final decision and dismiss patient's personal information)
2) What do you consider to be the primary ethical issue or dilemma raised by the situation?
3) How did you face this clinical case? Did you follow a standard approach based of literature or a free form? (Summarize the process step by step)
4) What thoughts or reflections came up handling this case?
5) What factors, values, or variables did you take in consideration in order to make your decision?
6) What emotions or feelings did you experience during the deliberation of the case?
7) What emotions or feelings do you feel now after time?

8) Did you ever get the feeling that you did not handle the situation correctly? If so what would you have done differently?
9) Do you ever feel regrets about this case? If yes can you explain what you regret and why?
10) Would you confirm or change your decision now? Why?

- **Clinical Ethics Consultants Survey**

Dear Dr./Mr./Ms,

My name is Margherita Dahò and I am a Ph.D. student of University of Messina, in Italy. My academic mentors are Prof. Amelia Gangemi and Dr. Nneka Sederstrom.

I am writing to invite you to take part to my research study for my doctoral dissertation. The aim of the study is to explore moral reasoning of Clinical Ethics Consultants to better understand how they face and solve medical ethical dilemmas.

In light of the ongoing development and implementation of the Clinical Ethical Departments and committees in hospitals, it is important to understand how personal cognitive and emotional processes interact with bioethics knowledge while engaging in clinical ethics decision-making process.

If you would like to participate in this pilot study, you will be asked to choice what is the best outcome for the dilemmas presented. Before and after each story there are other multiple choice questions. The survey is anonymous in order to protect your privacy and will take you around 15 minutes.

Your contribution is important and we really appreciate it!

Please, do not hesitate to contact us if you have any questions.

Sincerely,

Margherita Dahò, Prof. Amelia Gangemi and Dr. Nneka Sederstrom

For assistance write to Margherita Dahò mdaho@unime.it

University of Messina, Italy

Participation consent

- Do you agree to take part to this study? □ YES □ NO

Demographics questions

- Your age _____
- Your gender _____
- What country of USA do you work in? _____
- What is your highest level of education? (specific the major field) _____
- How long have you been working as Clinical Ethics Consultant in any healthcare organization?

  □ 1-5 years

  □ 6-15 years

  □ over 15 years

Task questions introduction

In the following pages, you will read 6 short stories that you could encounter in your work as a Clinical Ethics Consultant. For each of the situations, a solution will be proposed. Your task is to elect the first good solution that comes in your mind. Before and after each story there will be also other multiple-choice questions regarding your experience in doing the task.

Story I- Part I

Which emotion, feeling or sensation do you feel at this moment *before* reading the first story? And how strong is this emotion, feeling or sensation from 0 to 5?

	0- Not at all	*1*	*2*	*3*	*4*	*5- Extremely strong*
Interest						
Worry/Concern						
Happiness						
Sadness/sorrow						
Anger						
Distress						
Frustration						
Fear						
Regret						
Enthusiasm						
Pride						
Peace						
Relief						
Commitment						
Satisfaction						
Curiosity						
Anxiety						
Insecurity						
Determination						
Nervousness						
Concentration						
Empathy						
Disappointment						

Story I- Part II

A severely adult anorexic patient cannot undergo cardiovascular surgery due to excessive malnutrition. According to physicians, she needs to reach a minimum necessary weight for the surgery but the patient is refusing to eat nor accepting a nasogastric-tube. Right now, the only way to address anorexia is a psychosurgery called STEREOTACTIC SURGERY (ST). This would involve performing an MRI-guided stereotactic cingulotomy on the patient, which is lesioning the white matter deep to the cingulate-gyrus. With rapid advancements made in neuroimaging methods, procedures have become more accurate and less invasive. However, most of the studies about the effects of ST

for Eating Disorders are based on animal experiments and sporadic human case-reports. Complications of ST include coma, hemorrhage, paralysis, seizures, infection. Short-term side-effects include incontinence, disorientation, sleep-disorders and usually disappear in one month. Long-term side effects include memory loss, fatigue, personality changes.

(Sun B. & Liu W. (2013). Stereotactic surgery for eating disorders. Surgical neurology international, 4(S3),164-9)

Would you suggest to perform on the patient the Stereotactic Surgery?

□ YES

□ NO

Story I- Part III

Which emotion, feeling or sensation do you feel at this moment *after* you made a choice? And how strong is this emotion, feeling or sensation from 0 to 5?

	0- Not at all	***1***	***2***	***3***	***4***	***5- Extremely strong***
Interest						
Worry/Concern						
Happiness						
Sadness/sorrow						
Anger						
Distress						
Frustration						
Fear						
Regret						
Enthusiasm						
Pride						
Peace						
Relief						
Commitment						
Satisfaction						

Curiosity	
Anxiety	
Insecurity	
Determination	
Nervousness	
Concentration	
Empathy	
Disappointment	

Story II – Part I

Which emotion, feeling or sensation do you feel at this moment *before* reading the next story? And how strong is this emotion, feeling or sensation from 0 to 5?

	0- Not at all	***1***	***2***	***3***	***4***	***5- Extremely strong***
Interest						
Worry/Concern						
Happiness						
Sadness/sorrow						
Anger						
Distress						
Frustration						
Fear						
Regret						
Enthusiasm						
Pride						
Peace						
Relief						
Commitment						
Satisfaction						
Curiosity						
Anxiety						
Insecurity						
Determination						
Nervousness						
Concentration						
Empathy						

Disappointment	

Story II- Part II

A 47 years-old father has been hospitalized due to leukemia and needs a bone marrow transplant. The only person found compatible with the patient is his daughter, whom he abused, during childhood. The patient is serving a sentence in prison and is undergoing psychological treatment. The daughter is now 15 and remembers nothing of what happened in the past. Being that the girl is still a minor, her mother must give consent for the intervention. However, her mother refuses to give consent, nor wants her daughter to approach the man she calls a "monster". Furthermore, she asks the medical staff to keep the abuse a secret from her daughter to avoid further trauma. The daughter, on the other hand, would like to donate the bone marrow to her father but does not seem to fully understand the risks of the intervention.

Would you suggest to permit the daughter to donate the marrow?

□ YES

□ NO

Story II- Part III

Which emotion, feeling or sensation do you feel at this moment *after* you made a choice? And how strong is this emotion, feeling or sensation from 0 to 5?

	0- Not at all	***1***	***2***	***3***	***4***	***5- Extremely strong***
Interest						
Worry/Concern						
Happiness						
Sadness/sorrow						
Anger						
Distress						
Frustration						

Fear	
Regret	
Enthusiasm	
Pride	
Peace	
Relief	
Commitment	
Satisfaction	
Curiosity	
Anxiety	
Insecurity	
Determination	
Nervousness	
Concentration	
Empathy	
Disappointment	

Story III – Part I

Which emotion, feeling or sensation do you feel at this moment *before* reading the next story? And how strong is this emotion, feeling or sensation from 0 to 5?

	0- Not at all	***1***	***2***	***3***	***4***	***5- Extremely strong***
Interest						
Worry/Concern						
Happiness						
Sadness/sorrow						
Anger						
Distress						
Frustration						
Fear						
Regret						
Enthusiasm						
Pride						
Peace						
Relief						
Commitment						
Satisfaction						

Curiosity	
Anxiety	
Insecurity	
Determination	
Nervousness	
Concentration	
Empathy	
Disappointment	

Story III- Part II

The health clinic in which you work is full of patients with the latest flu virus. The hospital has just received a new shipment of drugs that can cure this new strain of the flu virus but the new drugs have their own severe side effects. One of these side effects is a severe allergic reaction, which can include difficulty breathing, tachycardia, hoarseness, swelling, and hives. If you suggest administering the drugs to the patients, a small number will probably die because of these side effects. Anyway, the majority of the flu patients will live. Certain people who may suffer from severe side effects are those already affected by heart problems, other severe health conditions (e.g. kidneys diseases), or first-semester pregnant women. If you do not, most will continue to suffer from the effects of the flu virus for some time.

Would you suggest to provide the drug to all the patients?

□ YES

□ NO

Story III- Part III

Which emotion, feeling or sensation do you feel at this moment *after* you made a choice? And how strong is this emotion, feeling or sensation from 0 to 5?

	0- Not at all	***1***	***2***	***3***	***4***	***5- Extremely strong***
Interest						
Worry/Concern						
Happiness						
Sadness/sorrow						

Anger	
Distress	
Frustration	
Fear	
Regret	
Enthusiasm	
Pride	
Peace	
Relief	
Commitment	
Satisfaction	
Curiosity	
Anxiety	
Insecurity	
Determination	
Nervousness	
Concentration	
Empathy	
Disappointment	

Story IV- Part I

Which emotion, feeling or sensation do you feel at this moment *before* reading the next story? And how strong is this emotion, feeling or sensation from 0 to 5?

	0- Not at all	***1***	***2***	***3***	***4***	***5- Extremely strong***
Interest						
Worry/Concern						
Happiness						
Sadness/sorrow						
Anger						
Distress						
Frustration						
Fear						
Regret						
Enthusiasm						
Pride						
Peace						

Relief	
Commitment	
Satisfaction	
Curiosity	
Anxiety	
Insecurity	
Determination	
Nervousness	
Concentration	
Empathy	
Disappointment	

Story IV- Part II

A 26 years old woman becomes pregnant but her body reacts in an unusual fashion. She develops a severe case of preeclampsia, a dangerous syndrome that usually leads to rapid increases in blood pressure. This severe disease causes red blood cell breakdown, a low blood platelet count, impaired liver function, kidney dysfunction, shortness of breath, or visual disturbances. The only possible treatment to save her is to deliver the baby and providers need to take a decision soon. However, she does not agree to deliver her baby because he is only 19 weeks old, meaning he is too young to survive on his own. Fetuses at this age have almost no chance of survival. However, even if the baby survives he would probably develop many complications. The father instead wants the mother to live and prefers the birth of the baby.

Would you suggest to perform the delivery of the baby?

□ YES

□ NO

Story IV – Part III

Which emotion, feeling or sensation do you feel at this moment *after* you made a choice? And how strong is this emotion, feeling or sensation from 0 to 5?

	0- Not at all	***1***	***2***	***3***	***4***	***5- Extremely strong***
Interest						

Worry/Concern	
Happiness	
Sadness/sorrow	
Anger	
Distress	
Frustration	
Fear	
Regret	
Enthusiasm	
Pride	
Peace	
Relief	
Commitment	
Satisfaction	
Curiosity	
Anxiety	
Insecurity	
Determination	
Nervousness	
Concentration	
Empathy	
Disappointment	

Story V- Part I

Which emotion, feeling or sensation do you feel at this moment *before* reading the next story? And how strong is this emotion, feeling or sensation from 0 to 5?

	0- Not at all	***1***	***2***	***3***	***4***	***5- Extremely strong***
Interest						
Worry/Concern						
Happiness						
Sadness/sorrow						
Anger						
Distress						
Frustration						
Fear						
Regret						

Enthusiasm	
Pride	
Peace	
Relief	
Commitment	
Satisfaction	
Curiosity	
Anxiety	
Insecurity	
Determination	
Nervousness	
Concentration	
Empathy	
Disappointment	

Story V- Part II

A 63-year-old woman and 8-year-old homozygous twins are suffering from a form of kidney disease. Their dialysis treatments did not give the desired results and they all need kidney transplants. Patients with kidney diseases generally experience substantial benefits from transplantation when dialysis fails. The average wait time for a kidney from the national donor waiting list in the US is 5 years but this wait time depends on one personal situation and/or the availability of a donor. A teenage deceased donor has been found and his kidneys are found to be compatible with all 3 patients. The woman's condition is considered to be more serious and without a transplant, she is expected to die in 24-36 months. The woman is also higher on the waitlist. The twins have higher chances of survival, as well as a longer life expectancy (20-30 years).

Would you suggest to provide the kidneys to the twin children

□ YES

□ NO

Story V- Part III

Which emotion, feeling or sensation do you feel at this moment *after* you made a choice? And how strong is this emotion, feeling or sensation from 0 to 5?

	0-	***1***	***2***	***3***	***4***	***5-***

	Not at all					*Extremely strong*
Interest						
Worry/Concern						
Happiness						
Sadness/sorrow						
Anger						
Distress						
Frustration						
Fear						
Regret						
Enthusiasm						
Pride						
Peace						
Relief						
Commitment						
Satisfaction						
Curiosity						
Anxiety						
Insecurity						
Determination						
Nervousness						
Concentration						
Empathy						
Disappointment						

Story VI- Part I

Which emotion, feeling or sensation do you feel at this moment *before* reading the next story? And how strong is this emotion, feeling or sensation from 0 to 5?

	0- Not at all	*1*	*2*	*3*	*4*	*5- Extremely strong*
Interest						
Worry/Concern						
Happiness						
Sadness/sorrow						
Anger						
Distress						

Frustration	
Fear	
Regret	
Enthusiasm	
Pride	
Peace	
Relief	
Commitment	
Satisfaction	
Curiosity	
Anxiety	
Insecurity	
Determination	
Nervousness	
Concentration	
Empathy	
Disappointment	

Story VI- Part II

A pregnant HIV positive woman informs you that her boyfriend, and father of the baby, is not aware of her status. She also expresses concern that if he found out her life would be in danger. She is madly in love and wants to do everything to keep the relationship progressing smoothly to what she believes will be a marriage. She asks to ensure her HIV status is not told to the father of the baby even though a baby can become infected with HIV in the womb, during delivery or while breastfeeding. The only way to decrease chances of transmission to the baby is through medications that are given during labor, delivery, and postpartum phase. She is refusing to have the medicine given to her and take them at home because she is scared her boyfriend will figure it out.

Would you suggest to withhold the medications and keep her secret?

□ YES

□ NO

Story VI- Part III

Which emotion, feeling or sensation do you feel at this moment *after* you made a choice? And how strong is this emotion, feeling or sensation from 0 to 5?

	0- Not at all	*1*	*2*	*3*	*4*	*5- Extremely strong*
Interest						
Worry/Concern						
Happiness						
Sadness/sorrow						
Anger						
Distress						
Frustration						
Fear						
Regret						
Enthusiasm						
Pride						
Peace						
Relief						
Commitment						
Satisfaction						
Curiosity						
Anxiety						
Insecurity						
Determination						
Nervousness						
Concentration						
Empathy						
Disappointment						

❖ References

AHA (American Health Association), (1985). National Society For Patient Representatives Ethics Committees Double Since 1983: Survey, *Hospitals 1*, 60-64.

Aleksandrova, S., (2008). Survey On The Experience In Ethical Decision-Making And Attitude Of Pleven University Hospital Physicians Towards Ethics Consultation, *Medical Health Care And Philosophy*, 11:35–42.

AMA (American Medical Association), (2006). *An Ethical Force Program Consensus Report. An Ethical Force Program: Improving Communication, Improving Care*. https://idainstitute.com/fileadmin/user_upload/documents/PCC_Resources/PCC_Definitions/AMA_Improving_Communication_Improving_Care_01.pdf

APA (American Psychology Association), Online Dictionary (2020). Https://Dictionary.Apa.Org/

ASBH (American Society Of Bioethics And Humanities), (2011). *Core Competencies For Healthcare Ethics Consultation. 2nd Ed.,* Chicago.

ASBH (American Society Of Bioethics And Humanities), (2015). *Improving Competencies In Clinical Ethics Consultation. An Education Guide. 2nd Ed*., Chicago.

Arnsten, A.F.T., (2009). Stress Signalling Pathways That Impair Prefrontal Cortex Structure And Function, *Nat. Rev. Neurosci.* 10, 410–422.

Aulisio, M.P., (1999). Ethics Consultations: Is It Enough To Mean Well?, *Cec Forum*, 11(3), 208-217.

Avramova, Y.R., Inbar, Y., (2013). Emotion And Moral Judgment, *Wiley Interdiscip. Rev. Cogn. Sci*. 4169–178. 10.1002/Wcs.1216;

Banks, S., Gallagher, A., (2009). *Ethics In Professional Life*, New York: Palgrave Macmillan.

Baron, J., Gürçay, B., Luce, M.F., (2018). Correlations Of Trait And State Emotions With Utilitarian Moral Judgments, *Cognition And Emotion*, 32(1):116-129.

Baron, J., Ritov, I., (2004). Omission bias, individual differences, and normality, *Organizational Behavior and Human Decision Processes*, 94(2), 74–85.

Bartels, D.M., Pizarro, D.A., (2011). The Mismeasure Of Morals: Antisocial Personality Traits Predict Utilitarian Responses To Moral Dilemmas, *Cognition,* 121:154–161.

Beauchamp, T., Childress, J., (2013). *Principles Of Biomedical Ethics. 7th Ed.,* Oxford University Press: Oxford.

Bell, D.E., (1982). Regret In Decision-Making Under Uncertainty*. Oper. Res*., 30, 961–981.

Bennis, W. M., Medin, D. L., Bartels, D. M., (2010). The Costs And Benefits Of Calculation And Moral Rules, *Perspectives On Psychological Science*, 5(2), 187–202.

Białek, M., De Neys, W., (2017). Dual Processes And Moral Conflict: Evidence For Deontological Reasoners' Intuitive Utilitarian Sensitivity, *Judgment And Decision Making*, 12(2), 148-167.

Bicchieri, C., (2005). *The Grammar Of Society: The Nature And Dynamics Of Social Norms*, Cambridge University Press: Cambridge.

Bicchieri, C., (2016). *Norms In The Wild How To Diagnose, Measure, And Change Social Norms*, Oxford University Press: Oxford.

Bio-Med Project, (1998). *Basic Ethics Principles In European Bioethics And Biolaw. Vol I*, 1995-1998, P. 18-19.

Bio-Med Project, (1998b). *Basic Ethics Principles In European Bioethics And Biolaw. Vol II*, 1995-1998, P. 15-44.

Bodenhausen, G. V., Kramer, G. P., Süsser, K., (1994). Happiness And Stereotypic Thinking In Social Judgment, *Journal Of Personality And Social Psychology*, 66, 621-632.

Bodenhausen, G.V., Shepard, L., Kramer, G.P., (1994). Negative Affect And Social Judgment: The Different Impact Of Anger And Sadness, *European Journal Of Social Psychology*, 24:45–62.

Borg, J.S., Hynes, C., Van Horn, J., Grafton, S., Sinnott-Armstrong, W., (2006). Consequences, Action, And Intention As Factors In Moral Judgments: An fMRI Investigation, *J. Cogn. Neurosci*, 18, 803–817.

Bourgeois-Gironde, S., (2010). Regret And The Rationality Of Choices, *Phil. Trans. R. Soc. B*, 365:249–257.

Callahan, D., (1994). *Bioethics: Private Choice And Common Good*, In Hastings Centre Report, May-June 1994, Pp 28-31, In Privitera, S. (Ed), *Bioetica Mediterranea E Nord Europea*, Istituto Siciliano Di Bioetica, Armando Ed: Roma.

Cambria E., Livingstone A., Hussain A., (2012). *The Hourglass of Emotions*. In: Esposito A., Esposito A.M., Vinciarelli A., Hoffmann R., Müller V.C. (eds) *Cognitive Behavioural Systems. Lecture Notes in Computer Science*, vol 7403. Springer, Berlin, Heidelberg.

Camille, N., Coricelli, G., Sallet, J., Pradat-Diehl, P., Duhamel, J.R., Sirigu A., (2004), The Involvement Of The Orbitofrontal Cortex In The Experience Of Regret, *Science,* 304: 1167–1170.

Canadian Conference Of Catholics Bishops, (1971). *The Right To Life. Sect. 2* In *The Medico-Moral Guide Of Canadian Bishops*. Origins 1: 427-428. 62 1.

Choe, S., Min, K., (2011). Who Makes Utilitarian Judgments? The Influences Of Emotions On Utilitarian Judgments, *Judgm. Decis. Mak.,* 6, 580–592.

Christensen, J. F., Flexas, A., Calabrese, M., Gut, N. K., Gomila, A., (2014). Moral Judgment Reloaded: A Moral Dilemma Validation Study, *Frontiers In Psychology*, 5:607.

Christensen, J.F., Gomila A., (2012). Moral Dilemmas In Cognitive Neuroscience Of Moral Decision-Making: A Principled Review, *Neurosci. Biobehav. Rev,* 36:1249–1264.

Cohn, M. A., Fredrickson, B. L., (2009). *Positive emotions*. In S. J. Lopez and C. R. Snyder (Eds.), *The Oxford Handbook of Positive Psychology (2nd ed.).* https://doi.org/10.1093/oxfordhb/9780195187243.013.0003

Congress, E. P., (1999). *Social Work Values And Ethics: Identifying And Resolving Professional Dilemmas*, Wadsworth Group/Thompson Learning, California: Usa.

Conway, P., Gawronski, B., (2013). Deontological And Utilitarian Inclinations In Moral Decision Making: A Process Dissociation Approach, *Journal Of Personality And Social Psychology*, 104, 216–235.

Coricelli, G., Critchley, H.D., Joffily, M., O'Doherty, J.P., Sirigu A, Dolan, R.J., (2005). Regret And Its Avoidance: A Neuroimaging Study Of Choice Behavior, *Nat. Neurosci*. 8: 1255–1262.

Coricelli, G., Dolan, R.J., Sirigu, A., (2007). Brain, Emotion And Decision Making: The Paradigmatic Example Of Regret. *Trends In Cognitive Sciences,* 11: 258-265.

Cortini, M., Tria, S., (2014). Triangulating Qualitative and Quantitative Approaches for the Analysis of Textual Materials: An Introduction to T-Lab. *Social Science Computer Review*, 32(4), 561–568.

Cushman, F.A., Young L., (2011). Patterns Of Moral Judgment Derive From Non-Moral Psychological Representations, *Cognitive Science*, 35: 1052–1075.

Cushman, F.A., Young, L., Hauser, M.D., (2006). The Role Of Conscious Reasoning And Intuitions In Moral Judgment: Testing Three Principles Of Harm, *Psychological Science*, 17(12):1082–1089.

De Steno, D., Dasgupta, N., Bartlett, M. Y., Cajdric, A., (2004). Prejudice From Thin Air: The Effect Of Emotion On Automatic Intergroup Attitudes, *Psychological Science*, 15(5), 319-324.

De Quervain, D. J., Fischbacher, U., Treyer, V., Schellhammer, M., Schnyder, U., Buck, A., (2004). The Neural Basis Of Altruistic Punishment, *Science,* 305: 1254–1258.

Devisser, L., Van Der Knaap, L.J., Van De Loo, A.J., Van Der Weerd, C.M., Ohl, F., Van Den Bos R., (2010). Trait Anxiety Affects Decision-Making Differently In Healthy Men And Women: Towards Gender-Specific Endophenotypes Of Anxiety, *Neuropsychologia*, 48(6):1598-1606.

Dias-Ferreira, E., Sousa, J. C., Melo, I., Morgado, P., Mesquita, A. R., Cerqueira, J.J., et al., (2009). Chronic Stress Causes Frontostriatal Reorganization And Affects Decision-Making. *Science,* 325, 621–625.

Djeriouat, H., Trémolière, B., (2014). The Dark Triad Of Personality And Utilitarian Moral Judgment: The Mediating Role Of Honesty/Humility And Harm/Care. *Pers. Individ. Dif*. 67: 11–16.

Dobrin, A., (2003). Moral Reasoning Of Members Of Hospital Ethics Committees: A Pilot Study, *Journal Of Clinical Ethics*, 14(4), 270–275.

Dolgoff, R., Lowenberg, F.M., Harrington, D., (2009). *Ethical Decisions For Social Work Practice. 8th Ed*., Brooks/Cole Ed: California.

Eskine, J.K., Kacinik, A.N., Prinz, J.J., (2011). A Bad Taste In The Mouth: Gustatory Disgust Influences Moral Judgment, *Psychological Science*, 22: 295–299.

Feinberg, M., Willer, R., Antonenko, O., John, O.P., (2012). Liberating Reason From The Passions: Overriding Intuitionist Moral Judgments Through Emotion Reappraisal*, Psychol. Sci*., 23:788–795.

Fleetwood, J.E., Arnold, R.M., Baron, R.J., (1989). Giving Answers Or Raising Questions? The Problematic Role Of Institutional Ethics Committees, *Journal Of Medical Ethics*, 15, 137-142.

Fletcher, J.C., Siegler, M., (1996). What Are The Goals Of Ethics Consultations? A Consensus Statement, *Journal Of Clinical Ethics*, 7(2) 122-126.

Førde, R., Pedersen, R., Akre, V., (2008). Clinicians' Evaluation Of Clinical Ethics Consultations In Norway: A Qualitative Study*, Medical Health Care, And Philosophy*, 11:17–25.

Foot, P., (1967). The Problem Of Abortion And The Doctrine Of The Double Effect, *Oxford Review*, Number 5.

Fournier., V, Pousset, M., (2006). Cochin Hospital Clinical Ethics Center: The First Two Years, *La Presse Medical*, 35:960–6.

Fox, E., Myers, S., Pearlman, R.A., (2007). Ethics Consultation In United States Hospitals: A National Survey, *Am J Bioeth*, 7(2):13–25.

Friesdorf, R., Conway, P., Gawronski, B., (2015). Gender Differences In Responses To Moral Dilemmas: A Process Dissociation Analysis, *Personality And Social Psychology Bulletin*, 41(5), 696–713.

Fry, S.T., Johnstone, M.J., (2002). *Ethics In Nursing Practice. 2nd Ed*., Oxford Blackwell Publishing: Oxford.

Gangemi, A., Bourgeois-Gironde, S., Mancini F., (2015). Feelings Of Error In Reasoning—In Search Of A Phenomenon, *Thinking & Reasoning*, 21:4, 383-396.

Gangemi, A., Mancini, F., (2007). Guilt And Focusing In Decision-Making, *J. Behav. Dec. Making*, 20: 1–20.

Gawronski, B., Armstrong, J., Conway, P., Friesdorf, R., and Hütter, M. (2017). Consequences, norms, and generalized inaction in moral dilemmas: the CNI model of moral decision-making*, J. Pers. Soc. Psychol*, 113, 343–376.

Gawronski, B., Conway, P., Armstrong, J., Friesdorf, R.,Hütter, M. (2018). Effects Of Incidental Emotions On Moral Dilemma Judgments: An Analysis Using The Cni Model, *Emotion*, 18(7):989-100.

Glasa, J., (2002). Establishment And Work Of Ethics Committees In Central And Eastern European Countries, *Medical Ethics & Bioethics*, 9:9–12.

Gleichgerrcht, E., Young, L., (2013). Low Levels Of Empathic Concern Predict Utilitarian Moral Judgment, *Plos One,* 8(4): E60418.

Gilovich, T., Melvec, V.H., (1994). The Temporal Pattern To The Experience Of Regret, *J. Pers. Soc. Psychol.* 67, 357–365.

Gracia, D., (1993). The Intellectual Basis Of Bioethics In Southern European Countries, *Bioethics*, 7 (2–3): 97–107.

Gracia, D., (2001). *History Of Medical Ethics*, In Ten-Have H. And Gordijn B. (Eds.), *Bioethics In A European Perspective*, Kluwer: Dordrecht, P. 44.

Greason, M., (2020). Ethical Reasoning And Moral Distress In Social Care Among Long-Term Care Staff, *J Bioeth Inq*. Online Ahead Of Print.

Greene, J., (2005). *Emotion And Cognition In Moral Judgment: Evidence From Neuroimaging.* In Changeux, J.P., Damasio, A.R., Singer, W., Christen Y., (eds) *Neurobiology of Human Values. Research and Perspectives in Neurosciences.* Springer, Berlin, Heidelberg.

Greene, J. D. (2008). *The secret joke of Kant's soul*. In W. Sinnott-Armstrong (Ed.), *Moral psychology, Vol. 3. The neuroscience of morality: Emotion, brain disorders, and development* (p. 35–80). MIT Press

Greene, J.D., Cushman, F.A., Stewart, L.E., Lowenberg, K., Nystrom, L.E., Cohen, J.D., (2009). Pushing Moral Buttons: The Interaction Between Personal Force And Intention In Moral Judgment, *Cognition*, 111(3): 364-371.

Greene, J.D., Haidt, J., (2002). How (And Where) Does Moral Judgment Work?, *Trends In Cognitive Sciences*, 6(12), 517-523.

Greene, J., Morelli, S., Lowenberg, K., Nystrom, L.E., Cohen J., (2008). Cognitive Load, Selectively Interferes With Utilitarian Moral Judgment, *Cognition*, 107(3), 1144-1154.

Greene, J. D., Nystrom, L. E., Engell, A. D., Darley, J. M., Cohen, J. D., (2004). The Neural Bases Of Cognitive Conflict And Control In Moral Judgment, *Neuron*, 44(2), 389-400.

Greene, J.D., Sommerville, R.B., Nystrom, L.E., Darley, J.M., Cohen, J.D., (2001). An fMRI Investigation Of Emotional Engagement In Moral Judgment, *Science*, 293.

Gustafson, J., (1990). Moral Discourse About Medicine: A Variety Of Forms, *Journal Of Medicine And Philosophy*, 15, 125-142.

Haidt, J., (2001). The Emotional Dog And Its Rational Tail: A Social Intuitionist Approach To Moral Judgment, *Psychological Review*, 108, 814-834.

Haidt, J., Bjorklund, F., (2007). *Social Intuitionists Answer Six Questions About Morality*. In W. Sinnott-Armstrong (Ed), *Moral Psychology, Vol. 2: The Cognitive Science Of Morality* (Pp. 181-217). MIT Press: Cambridge.

Hajibabaee, F., Joolaee, S., Cheraghi, M.A., et al., (2016). Hospital/Clinical Ethics Committees' Notion: An Overview*, J Med Ethics Hist Med*, 18, 9:17.

Hartley, C.A., Phelps, E.A., (2012). Anxiety And Decision-Making. *Biol Psychiatry*, 72(2):113-118.

Hauser, M., Cushman, F.A., Young, L.J.R., Mikhail, J.M., (2007). A Dissociation Between Moral Judgments And Justifications, *Mind & Language*: 22, 1-21.

Hawley, G., (2007). *Ethics In Clinical Practice An Inter-Professional Approach,* Pearson Education: Harlow.

Helion, C., Ochsner, K. N., (2016). The Role Of Emotion Regulation In Moral Judgment. *Neuroethics*, 1-12.

Hermans, E. J., Henckens, M. J. A. G., Joëls, M., Fernández, G., (2017). *Time dependent shifts in neural systems supporting decision-making under stress*, In J. Dreher and L. Tremblay (Eds) *Decision Neuroscience*, , San Diego, CA: Academic Press, 371–385.

Hirshleifer, D., Shumway, T., (2003). Good Day Sunshine: Stock Returns And The Weather. *The Journal Of Finance*, 58: 1009-1032.

Horne, Z., Powell, D., (2016). How Large Is The Role Of Emotion In Judgments Of Moral Dilemmas? *Plos One*, 11:E154780.

Hurst, S.A., Reiter-Theil, S., Slowther, A.M., Pegoraro, R., Førde, R., Danis, M., (2008). Should Ethics Consultants Help Clinicians Face Scarcity In Their Practice?, *J Of Medical Ethics*, 34:241–6.

Johnstone, M., (1999). *Bioethics: A Nursing Perspective. 3rd Ed*., Harcourt Saunders: Sidney.

Jonsen, A., (1998). *The Birth Of Bioethics*, Oxford University Press: New York/Oxford.

Johnson-Laird, P.N., (2010). Mental Models And Human Reasoning, *Proceedings Of The National Academy Of Sciences*, 107 (43) 18243-18250.

Kälvemark, S., Höglund, A.T., Hansson, M.G., Westerholm, P., Arnetz, B., (2004). Living With Conflicts-Ethical Dilemmas And Moral Distress In The Health Care System, *Soc Sci Med*, 58(6):1075-1084.

Kamm, F.M., (1989). Harming Some To Save Others, *Philosophical Studies,* 57(3): 227-60.

Koenigs, M., Young, L., Adolphs, R., Tranel, D., Cushman, F., Hauser, M., Damasio, A., (2007). Damage To The Prefrontal Cortex Increases Utilitarian Moral Judgements. *Nature*, 446(7138), 908–911.

Kossowska, M., Czernatowicz-Kukuczka, A., Szumowska, E., Czarna, A., (2016). Cortisol And Moral Decisions Among Young Men: The Moderating Role Of Motivation Toward Closure. *Pers. Individ. Differ*. 101, 249–253.

Lee, J. J., Gino, F., (2015). Poker-Faced Morality: Concealing Emotions Leads To Utilitarian Decision Making, *Organ. Behav. Hum. Decis. Processes,* 126: 49–64.

Li, Z., Wu, X., Zhang, L., Zhang, Z., (2017). Habitual Cognitive Reappraisal Was Negatively Related To Perceived Immorality In The Harm And Fairness Domains, *Front. Psychol*, 8:1805.

Leone, S., (1990). Il Problema Dei 'Valori Comuni' Nelle Deliberazioni Dei Comitati, *In Comitati Di Bioetica: Storia. Analisi, Proposte*, Edizioni Orizzonte Medico: Roma, Pp.143-158.

Lerner, J., Goldberg, J., Tetlock, P.E., (1998). Sober Second Thought: The Effects Of Accountability, Anger, And Authoritarianism On Attribution Of Responsibility, *Personality And Social Psychology Bulletin*, 24: 563–574.

Loewenstein, G.F., Weber, E.U., Hsee, C.K., Welch, N., (2001). Risk As Feelings. *Psychological Bulletin, 127*(2), 267–286.

Loomes, G., Sugden, R., (1982). Regret Theory: An Alternative Theory Of Rational Choice Under Uncertainty. *Econ. J.* 92, 805–824.

Lotto, L., Manfrinati, A., Sarlo, M., (2014). A New Set Of Moral Dilemmas: Norms For Moral Acceptability, Decision Times, And Emotional Salience, *J. Behav. Decis. Mak*., 27: 57–65.

May, W.W., (1975). The Composition And Function Of Ethical Committees, *J Med Eth*, 1:23-29.

Magelssen, M., Pedersen, R., Førde, R. J., (2014). Sources Of Bias In Clinical Ethics Case Deliberation *Med Ethics.* 40:678–682.

Mazzocco, K., Masiero, M., Carriero, M.C., Pravettoni, G., (2019). The Role Of Emotions In Cancer Patients' Decision-Making, *Ecancermedicalscience*, 13:914.

McCarthy, J., Deady, R., (2008). Moral Distress Reconsidered. *Nurs Ethics*, 15(2):254-262.

McEwen, B.S., (2019). The Good Side Of "Stress", *Stress*, 22(5):524-525.

McGee, G., Caplan, A.L., Spanogle, J.P., et al., (2001). *A National Study Of Ethics Committees*, *Am J Bioeth*, 1(4):60–4.

MacIntyre, A., (1984). *After Virtue: A Study In Moral Theory. 3rd Edition.*, University Of Notre Dame Press: Indiana.

McLure, M.L., (1991). Nurse-Physician Conflict, *Journal Of Professional Nursing*, 7, 329.

Mellers, B., et al., (1999). Emotion-Based Choice. *J. Exp. Psychol. Gen*. 3, 332–345.

Mill, J.S., (1863). *Utilitarianism* (1 Ed.). Parker, Son & Bourn, West Strand: London.

Moore, A., Clark, B., Kane, M., (2008). Who Shalt Not Kill?: Individual Differences In Working Memory Capacity, Executive Control, And Moral Judgment, *Psychological Science*, 19(6), 549-557.

Nelissen, R.M.A., Zeelenberg, M., (2009). Moral Emotions As Determinants Of Third-Party Punishment: Anger, Guilt, And The Functions Of Altruistic Sanctions, *Judgment And Decision Making*, 4, 543–553.

Nuñez, N., Schweitzer, K., Chai, C. A., Myers, B., (2015). Negative Emotions Felt During Trial: The Effect Of Fear, Anger, And Sadness On Juror Decision Making. *Appl. Cognit. Psychol.*, 29: 200– 209.

Oberle, K., Hughes, D., (2000). Doctors' And Nurses' Perceptions Of Ethical Problems In End-Of-Life Decisions*, J Of Adv Nur*, 33(6), 707-715.

Pandey, A., Chandwani, R., Navare, A., (2018). How Can Mindfulness Enhance Moral Reasoning? An Examination Using Business School Students. *Business Ethics: A Eur Rev*., 27: 56– 71.

Parizeau, M.H., (1995). *Compétence Éthique, Expertise Éthique Et Modèles De Comités D'éthique Clinique*, In M.H. Parizeau (Ed.) *Hôpital & Éthique: Rôles Et Défis Des Comités D'éthique Clinique*, Les Presses De La Université Laval: Québec.

Pascual, L., Rodrigues, P., Gallardo-Pujol, D., (2013). How Does Morality Work In The Brain? A Functional And Structural Perspective Of Moral Behavior, *Front. Integr. Neurosci.,* 7:65.

Pedersen, R., Akre, V., Førde, R., (2009). What Is Happening During Case Deliberations In Clinical Ethics Committees? A Pilot Study. *J Med Ethics*, 35(3):147-152.

Pedersen, R., Akre, V., Førde, R., (2009). Barriers And Challenges In Clinical Ethics Consultations: The Experiences Of Nine Clinical Ethics Committees. *Bioethics*. 23(8):460-469.

Pegoraro, R., Picozzi, M., Spagnolo, G., (2016). *La Consulenza Di Etica Clinica In Italia. Lineamenti E Prospettive.* Piccin Ed.: Padova.

Pence, G.E., (1990). *The Baby Jane Doe Case*, In *Classic Cases In Medical Ethics*, Mcgraw-Hill Publishing Co.: New York, Pp. 136-63.

Pfäfflin, M., Kobert, K., Reiter-Theil, S., (2009). Evaluating Clinical Ethics Consultation: A European Perspective, *Cambridge Quarterly Of Healthcare Ethics*, 18, 406–419.

Pless, N., Sabatella, F. And Maak, T., (2017). *Mindfulness, Re-Perceiving, And Ethical Decision Making: A Neurological Perspective Responsible Leadership And Ethical Decision-Making*, In *Ethical Issues In Organizations*, Vol. 17, Emerald Publishing Limited: England, Pp. 1-20.

Pletti, C., Lotto, L., Tasso A, Sarlo M, (2016). Will I Regret It? Anticipated Negative Emotions Modulate Choices In Moral Dilemmas, *Frontiers In Psychology*, 7: 1918.

President's Commission For The Study Of Ethical Problems In Medicine And Biomedical And Behavioral Research, (1983). *Defining Death*, Us Government Printing Office: Washington D.C.

Privitera, S., (1996). *Bioetica Mediterranea E Nordeuropea*, Istituto Siciliano Di Bioetica, Armando Ed.: Roma.

Pochard, F., Azoulay, E., Chevret, S., et al., (2001). Symptoms Of Anxiety And Depression In Family Members Of Intensive Care Unit Patients: Ethical Hypothesis Regarding Decision-Making Capacity, *Crit Care Med*, 29(10).

Polman, E., Ruttan, L.R., (2012). Effects Of Anger, Guilt And Envy On Moral Hypocrisy, *Personality And Social Psychology Bulletin*, 33: 129–139.

Prowse Turner, J. A., Thompson, V. A., (2009). The role of training, alternative models, and logical necessity in determining confidence in syllogistic reasoning, *Thinking & Reasoning*, 15, 69–100.

Racine, E., (2008). Enriching Our Views On Clinical Ethics: Results Of A Qualitative Study Of The Moral Psychology Of Healthcare Ethics Committee Members, *Bioethical Inquiry*, 5:57-67.

Raffone, A., Srinivasan, N., (2017). Mindfulness And Cognitive Functions: Toward A Unifying Neurocognitive Framework. *Mindfulness,* 8**,** 1–9.

Reamer, F., (1995). *Social Work Values And Ethics*, Columbia University Press: New York.

Reber, J., Tranel, D., (2017). Sex Differences In The Functional Lateralization Of Emotion And Decision Making In The Human Brain, *Journal Of Neuroscience Research*, 95(1-2), 270–278.

Reiter-Theil, S., (2001). The Freiburg Approach To Ethics Consultation: Process, Outcome And Competencies, *Journal Of Medical Ethics*, 27: 21–3.

Reiter-Theil, S., (2003). Balancing The Perspectives. The Patient's Role In Clinical Ethics Consultation*, Medical Health Care And Philosophy*, 6: 247–54.

Reiter-Theil, S., (2005). *Klinische Ethikkonsultation—Eine Methodische Orientierung Zur Ethischen Beratung Am Krankenbett, Schweizerische Arztezeitung*, 86:346–51.

Reiter-Theil, S., Agich, G.J., (2008). Research On Clinical Ethics And Consultation. Introduction To The Theme, *Medical Health Care And Philosophy*, 11:3–5.

Rendtorff, J.D., (2002). Basic Ethical Principles In European Bioethics And Biolaw: Autonomy, Dignity, Integrity, And Vulnerability--Towards A Foundation Of Bioethics And Biolaw, *Med Health Care Philos*, 5(3):235-44.

Rilling, J.K., Glenne, A.L., Jairama, M.R., Pagnoni, G., et al., (2007). Neural Correlates Of Social Cooperation And Non-Cooperation As A Function Of Psychopathy, *Biological Psychiatry*, 61(11):1260 – 1271.

Rilling, J.K., Gutman, D.A., Zeh, T.R., Pagnoni, G., Berns, G.S., Kiltset, C.D., (2002). A Neural Basis For Social Cooperation, *Neuron*, 35(2): 395 – 405;

Ritov, I., (1996). Probabilities Of Regret: Anticipation Of Uncertainty Resolution In Choice, *Organ. Behav. Hum. Decis. Process.* 66, 228–236.

Robison, W., Reeser, L.C., (2002). *Ethical Decision Making For Social Workers*, Allyn & Bacon: New York.

Rodney, P., (1998). Towards Ethical Decision-Making, In Nursing Practice, *Canadian Journal Of Nursing Administration*, 11 P. 34-45.

Ruedy, N., Schweitzer, M., (2010). In The Moment: The Effect Of Mindfulness On Ethical Decision Making, *Journal Of Business Ethics*, 95, 73–87.

Russell, J.A., (2003). Core Affect And The Psychological Construction Of Emotion, *Psychological Review*, 110: 145-172.

Sarlo, M., Lotto, L., Manfrinati, A., Rumiati, R., Gallicchio, G., Palomba, D., (2012). Temporal Dynamics Of Cognitive-Emotional Interplay In Moral Decision-Making, *J. Cogn. Neurosci*. 24: 1018–1029.

Schnall, S., Clore, G., Haidt, J., & Jordan, A., (2008). Disgust As Embodied Moral Judgment, *Personality And Social Psychology Bulletin*, 34, 1096-1109.

Seedhouse, D., (1998). *Ethics: The Heart Of Health Care. 2nd Ed*., Wiley Press: Chichester.

Seidel, A., Prinz, J., (2012). Mad And Glad: Musically Induced Emotions Have Divergent Impact On Morals, *Motiv Emot*, 37:629–637.

Seidel, A., Prinz, J., (2013). Sound Morality: Irritating And Icky Noises Amplify Judgments In Divergent Moral Domains, *Cognition*, 127(1):1-5.

Seitz, S.J., Lord, C.G., Taylor, C.A., (2007). Beyond Pleasure: Emotion Activity Affects The Relationship Between Attitudes And Behavior, *Personality And Social Psychology Bulletin*. 33, 933-947.

Self, D.J., Skeel, J.D., (1991). A Study Of The Foundations Of Ethical Decision Making Of Clinical Medical Ethicists, *Theoretical Medicine,* 12(2), 117–127.

Self, D.J., Skeel, J.D., (1998). The Moral Reasoning Of Cec Members, *Cec Forum*, 10(1), 43–54.

Sevinc, G., Lazar, S.W., (2019). How Does Mindfulness Training Improve Moral Cognition: A Theoretical And Experimental Framework For The Study Of Embodied Ethics, *Curr Opin Psychol*., 28:268-272.

Schwarz, N., (2012). *Feelings-As-Information Theory.* In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook Of Theories Of Social Psychology* (P. 289–308). Sage Publications: Usa.

Schwarz, N., Clore, G. L., (1983). Mood, Misattribution, And Judgments Of Well-Being: Informative And Directive Functions Of Affective States, *Journal Of Personality And Social Psychology*, 45, 513–523.

Shapiro, S.L., Jazaieri, H., Goldin, P.R., (2012). Mindfulness-Based Stress Reduction Effects On Moral Reasoning And Decision Making, *The Journal Of Positive Psychology*, 7:6, 504-515.

Singer, P., (1993). *Practical Ethics*, Cambridge University Press: Cambridge.

Sinnott-Armstrong, W., (2011). Emotion And Reliability In Moral Intuitions, *Emotion Review*, 3, 288-289.

Slowther, A., Johnston, C., Goodall, J., et al., (2004). Development Of Clinical Ethics Committees, *Bmj*, 328:950–2.

Starcke, K., Brand, M., (2012). Decision Making Under Stress: A Selective Review, *Neurosci. Biobehav. Rev*. 36, 1228–1248.

Steinkamp, N., Gordijn, B., (2003). Ethical Case Deliberation On The Ward. A Comparison Of Four Methods, *Medical Health Care And Philosophy*, 6:235–46.

Steinkamp, N., Gordijn, B., Borovecki, A., et al., (2007). Regulation Of Healthcare Ethics Committees In Europe, *Medical Health Care And Philosophy*, 10:461–75.

Suter, R.S., Hertwig, R., (2011). Time And Moral Judgment, *Cognition*, 119(3), Pp. 454-458.

Szekely, R.D., Opre, A., Miu, A.C., (2015a). Religiosity Enhances Emotion And Deontological Choice In Moral Dilemmas, *Personality And Individual Differences*, 79: 104-109.

Szekely, R.D., Miu, A.C., (2015b). Incidental Emotions In Moral Dilemmas: The Influence Of Emotion Regulation, *Cogn. Emot*. 29: 64–75.

Tong, R., (1997). *Theoretical Approaches To Bioethics: Theoretical Reflections And Practical Applications*, Westview Press: Boulder.

Tovote, P., Fadok, J., Lüthi, A., (2015). Neuronal Circuits For Fear And Anxiety. *Nat Rev Neurosci* 16, 317–331.

Thomson, J.J., (1976). Killing, Letting Die, And The Trolley Problem, *The Monist* 59(2): 204-17.

Thomson, J.J., (1985). The Trolley Problem, *Yale Law Journal* 94(6):1395–1415.

Thompson, C., Dowding, D., (2002). *Clinical Decision Making And Nursing Judgement*, Churchill Livingstone: Edinburgh.

Troyer, J., (2003). *The Classical Utilitarians. Bentham And Mills*, Hackett Publishing Company, Inc.: Usa.

Ugazio, G., Lamm, C., Singer, T., (2012). The Role Of Emotions For Moral Judgments Depends On The Type Of Emotion And Moral Scenario, *Emotion*, 12: 579-590.

Unger, P., (1996). *Living High And Letting Die*, Oxford University Press: Oxford.

Valdesolo, P., De Steno, D., (2006). Manipulations Of Emotional Context Shape Moral Judgment, *Psychological Science,* 17:476–477.

Wan, M., Zivnuska, S., Valle, M., (2020). Examining Mindfulness And Its Relationship To Unethical Behaviors, *Management Research Review*. Ahead-Of-Print.

Watson, D., Clark, A. L., (1999). The PANAS-X: Manual for the Positive and Negative Affect Schedule - Expanded Form, *Department of Psychological & Brain Sciences Publications*. doi:10.17077/48vt-m4t2

Wegener, D.T., Petty, R.E., (1994). Mood Management Across Affective States: The Hedonic Contingency Hypothesis, *Journal Of Personality And Social Psychology*, 66:1034-1048.

Weiden, P., (1987). Ethics By Committee?, *The New England Journal Of Medicine*, 317, 22: 1418.

Weile, J.V.M., Ten Have H., (1992). *Bioethics In A Supranational European Context: 1989- 1991*, In Lusting A, et al., *Bioethics Yearbook*, Kluwer Academic Publishers: Dordrecht.

Wheatley, T., Haidt J., (2005). Hypnotic Disgust Makes Moral Judgments More Severe, *Psychological Science*, 18: 780–784.

Wiech, K., Tracey, I., (2013). Pain, Decisions, And Actions: A Motivational Perspective, *Frontiers In Neuroscience*, 7, 46.

World Medical Association, Ethics Unit, *Declaration Of Helsinki*, Available At: Http://Www.Wma.Net/E/Ethicsunit/Helsinki.Htm.

Wulff, H., (1994). *Against The Four Principles: A Nordic View, In Principles Of Health Care Ethics*, John Wiley & Sons: Chichester, Pp. 277-286.

Younger, S.J., Jackson, D.L., et al., (1983). A National Survey Of Hospital Ethics Committees, *Critical Care Medicine*, 11(11):902-905.

Youssef, F.F., Dookeeram, K., Basdeo, V., Francis, E., Doman, M., Mamed, D., et al., (2012). Stress Alters Personal Moral Decision Making, *Psychoneuroendocrinology,* 37, 491–498.

Zeelenberg, M., Beattie, J., Van der Pligt, J., De Vries, N.K., (1996). Consequences Of Regret Aversion: Effects Of Expected Feedback On Risky Decision Making, *Organ. Behav. Hum. Decis. Process*. 65, 148–158.

Zhang, L., Kong, M., Li, Z., (2017a). Emotion Regulation Difficulties And Moral Judgment In Different Domains: The Mediation Of Emotional Valence And Arousal, *Pers. Individ. Dif.* 109 56–60.

Zhang, L., Li, Z., Wu, X., Zhang, Z., (2017b). Why People With More Emotion Regulation Difficulties Made A More Deontological Judgment: The Role Of Deontological Inclinations, *Frontiers In Psychology*, 8: 2095.

Zhang, L., Kong, M., Li, Z., Zhao, X., Gao L., (2018). Chronic Stress And Moral Decision-Making: An Exploration With The Cni Model. *Front. Psychol*. 9:1702.