



UNIVERSITÀ DEGLI STUDI DI PAVIA  
Graduated School of Life Science "Camillo Golgi"  
Research Doctorate in Psychology  
Cycle XXIX; 2013-2016

**Moral distress among critical care clinicians:  
Protective factors and consequences on clinicians' well-  
being and quality of care**

Giulia Marta Lamiani

Scientific Advisor: Prof. Piergiorgio Argentero

Coordinator: Prof. Gabriella Bottini

A.A. 2015-2016

# INDEX

<b>ABSTRACT</b> .....	<b>5</b>
<b>INTRODUCTION</b> .....	<b>7</b>
<b>CHAPTER 1. Psychological well-being and moral distress among critical care clinicians</b> .....	<b>9</b>
1. Psychological well-being of critical care clinicians .....	9
2. Definition of moral distress .....	12
3. Measures of moral distress .....	15
4. The moral residue and the crescendo effect model .....	17
5. Contributing factors and effects of moral distress.....	18
<b>CHAPTER 2. Systematic review of moral distress and related constructs</b> .....	<b>22</b>
1. Abstract .....	22
2. Introduction .....	23
3. Methods .....	24
4. Results .....	26
5. Discussion.....	35
<b>CHAPTER 3. Study 1. Validation of the Italian Moral Distress Scale-Revised (MDS-R) among critical care clinicians</b> .....	<b>40</b>
1. Abstract .....	40
2. Introduction .....	41
3. Methods .....	43
4. Results .....	47
5. Discussion.....	52
<b>CHAPTER 4. Study 2. Value congruence and depressive symptoms in critical care clinicians: the mediating effect of moral distress</b> .....	<b>56</b>
1. Abstract .....	56
2. Introduction .....	57
3. Methods .....	60
4. Results .....	64
5. Discussion.....	67
<b>CHAPTER 5. Study 3. Moral distress and family satisfaction with the quality of care: a preliminary study</b> .....	<b>70</b>
1. Abstract .....	70
2. Introduction .....	71

3. Methods .....	72
4. Results .....	76
5. Discussion.....	82
<b>CHAPTER 6. Discussion and conclusions .....</b>	<b>87</b>
1. Theoretical contributions .....	87
2. Limitations.....	89
3. Practical implications .....	90
4. Recommendations for future research.....	92
<b>ACKNOWLEDGMENTS .....</b>	<b>108</b>
<b>APPENDIX 1. Moral Distress Scale-Revised (Hamric et al., 2012) .....</b>	<b>109</b>
<b>APPENDIX 2. Italian Moral Distress Scale-Revised .....</b>	<b>111</b>

*To Eugenia and Giovanni*

## ABSTRACT

**Introduction.** Psychological well-being of people working in the helping professions has received increased attention in the last decade. Working in critical care settings, such as Intensive Care Units (ICUs), is especially stressful as it exposes clinicians to high patient morbidity and mortality, challenging work routines, and regular encounters with traumatic and ethical issues. Growing literature highlights that the experience of moral distress, that means not acting accordingly to what one perceives to be ethically right, is relevant among clinicians working in critical care. However, there is a lack of quantitative studies aimed to identify the protective factors and the consequences of moral distress on clinicians and patients. This thesis aimed to fill this gap by exploring: 1) the dimensionality of the construct of moral distress, through the validation of a scale to measure moral distress in Italy; 2) the protective factors of moral distress and its effect on clinicians' psychological well-being; and 3) the relationship between clinicians' moral distress and the perception of care quality by family members of ICU patients. **Methods.** A cross-sectional study was conducted involving physicians, nurses, and residents working in ICU, and the family members of their patients. Clinicians working in 8 ICUs (n=184) were administered the *Moral Distress Scale-Revised* (MDS-R; Hamric et al., 2012) and the *Beck Depression Inventory-II* (BDI-II; Beck, Steer & Brown, 2006) for validation. In addition, a subsample of clinicians of 7 ICUs (n=170) were administered two further subscales (Value and Control) of the *Areas of Worklife Scale* (AWS; Leiter & Maslach, 2005) in order to assess the relationships between moral distress, value congruence, control and depression. Family members (n=59) of the patients hospitalized in a subsample of 5 ICUs were administered the *Family Satisfaction with care in the ICU* survey (FS-ICU; Wall et al., 2007) in order to assess the relationship between clinicians' moral distress and family satisfaction with care. **Results.** The Italian MDS-R showed a 4-factor structure composed of: Futile care, Poor teamwork, Deceptive communication, and Ethical Misconduct. This model accounted for 59% of the total variance and presented a good fit with the data (RMSEA=.06; CFI=.95; TLI=.94; WRMR=.65). For what concerns the protective factors of moral distress and its effect on clinicians' well-being, a

mediation path from value congruence and control to depression through moral distress was tested, yielding a significant total indirect effect of value congruence on depression through moral distress ( $\beta = -.12$ ;  $p = .02$ ). Regarding the effect of moral distress on the quality of care, moral distress of clinicians correlated with the family satisfaction as to the inclusion in the decision making process ( $\rho = -.900$ ;  $p = .037$ ). Moral distress of physicians and nurses correlated with different aspects of family members' satisfaction. **Conclusions.** Findings of this thesis contributed to the refinement of the construct of moral distress and provided evidence of its multidimensionality. Congruence between individual and organizational value was found to influence moral distress. As moral distress was related to depression and family perception of care quality, interventions should be implemented to reduce it. The findings of this thesis offer a preliminary base for the development of tailored interventions for clinicians.

## **INTRODUCTION**

Over the last fifteen years, the theme of psychological well-being at work has received a large attention (Mannino, Falgares & Di Maria, 2002), especially for what concerns the healthcare professions. Literature shows that healthcare professionals are more at risk of developing symptoms of emotional distress in comparison to other jobs (Thomsen et al., 1999; Weinberg & Creed, 2000). At the same time, psychological well-being of healthcare professionals seems to be a pivotal component in order to provide quality care (Anagnostopoulos et al., 2012; Argentero et al., 2007; Garman, Morris, & Corrigan, 2002; Leiter, Harvie, & Frizzell, 1998). Findings of emerging research have shown that clinicians' stress, fatigue, burnout, or general psychological distress negatively affects healthcare systems and the quality of patient care (Wallace, Lemaire, & Ghali, 2009).

Working in critical care settings, such as Intensive Care Units (ICUs), is especially stressful as it exposes clinicians to high patient morbidity and mortality, challenging work routines, and regular encounters with traumatic and ethical issues (Donchin & Seagull, 2002). Only recently, the literature reported the potential harmful effects of working in such environment, including the development of burnout, secondary traumatization and other psychological disorders (Moss et al., 2016; Mealer et al., 2006).

Among the stress-related conditions, the experience of moral distress has received an increased attention among critical care clinicians. Moral distress was defined as the painful feeling that occurs when clinicians cannot carry out what they believe to be ethically appropriate actions because of personal or institutional constraints (Jameton, 1984). To date, moral distress has been studied mainly through qualitative or descriptive research. This body of research highlighted that moral distress may have profound negative consequences on critical care clinicians' well-being and organizational outcomes, affecting job satisfaction and retention (Wilkinson, 1988; Elpern, Covert & Kleinpell, 2005; Gutierrez, 2005; Ferrel, 2006; Ando, 2016). However, despite the relevance of the topic, there is a lack of quantitative studies aimed to identify the protective factors and the

consequences of moral distress in order to improve clinicians' well-being and the quality of care provided.

This thesis aims to fill this gap by exploring the construct of moral distress in critical care within the perspective of organizational psychology and by adopting a quantitative approach. Specifically, this thesis aims to contribute to the literature by exploring the dimensionality of the construct of moral distress as well as by identifying the protective factors and the consequences of moral distress on clinicians' well-being and on the family members' satisfaction with the ICU care received.

The thesis is organized as it follows. Chapter 1 provides a theoretical overview of the concept of moral distress, the scales that have been developed to measure it, the contributing factors and the effects of moral distress. Chapter 2 presents a review of the literature that aims to identify the quantitative studies that explore moral distress in relation to other psychological constructs. Chapter 3 reports the validation results of the *Moral Distress Scale-Revised* in an Italian sample of critical care clinicians (study 1). Chapter 4 describes the testing of a mediation model in which moral distress mediates the relationship between value congruence and depression among critical care clinicians (study 2). Chapter 5 reports the preliminary findings of a study conducted to explore the relationship between clinicians' moral distress and family members' satisfaction with the care received at the ICU (study 3). Finally, Chapter 6 summarizes the main contributions of this thesis and highlights its practical implications and methodological limitations. A discussion of possible future research closes the chapter.



# **CHAPTER 1. Psychological well-being and moral distress among critical care clinicians**

## **1. Psychological well-being of critical care clinicians**

In the last fifteen years, the theme of psychological well-being at work has received a large attention in the international and national literature. Several authors started to study the intrapsychic and relational experiences that may affect people's well-being at work (Mannino, Falgares & Di Maria, 2002) in order to promote workers' health.

Although the theme of well-being at work is relevant for workers of all settings, literature shows that people working in the helping professions (such as physicians, nurses, teachers, psychologists, social workers) are more at risk of developing symptoms of emotional distress in comparison to other jobs (Thomsen et al., 1999; Weinberg & Creed, 2000). Helping professions are those that address the problems of a person's physical, psychological, intellectual, emotional or spiritual well-being. Despite these professions may be a great source of personal satisfaction and accomplishment, they also imply unavoidable emotional stress (Ohaeri, 2003). Helping professions are particularly challenging not only because of the physical proximity with people in need, but also because of the emotional labor that they require. Emotional labor is the process of managing feelings and their expressions in order to fulfill emotional requirements that are part of the job role (Grandey 2000). The ability to manage emotions and regulate their expression when working with people is a pivotal component for helping professionals. However, it comes to cost when it requires to manage and sometimes suppress actual negative feelings such as sadness, anger or frustration (Zapf, 2002).

Among the helping professions, clinicians working in critical care, also known as intensive care, deserve a specific clinical attention. Intensive Care Unit's physicians, nurses and residents work in a clinically complex and demanding environment (Donchin & Seagull, 2002). Working in

an Intensive Care Unit (ICU) can be especially stressful because of the high patient morbidity and mortality, challenging work routines, and frequent encounters with traumatic and ethical issues. Due to the high intensity of care that is offered, ICUs are generally small units, with a limited numbers of beds (6-12) and a high ratio of clinicians per patient. Patients who are generally admitted to the ICUs present life-threatening conditions and require comprehensive care and constant monitoring. They are often unconscious and sometimes may receive mechanical ventilation and be fed enterally. Since most ICU patients cannot make decisions for themselves (Nelson et al., 2001), family members are often involved as surrogate decision makers and their engagement in care is especially important.

Clinicians working in critical care are often exposed to several job stressors that impact their emotional well-being. Stressors are related to the clinical, relational, emotional and ethical aspects of ICU care. For example, watching sick or violated bodies, performing invasive procedures, managing end-of-life decisions that may have relevant ethical implications, communicating bad news to family members, assisting to patients' death, and in some cases dealing with the sensitive process of organ donation. The psychological effects of working in the ICU have been recently studied (Embriaco et al., 2012; Karanikola et al., 2015). Even if there is a great individual variance in the reaction to stress, these studies show that working in critical care settings may expose clinicians to develop stress-related syndromes or conditions. Specifically, studies explored the experience of burnout, Post-Traumatic Stress Disorder, and secondary traumatization among critical care clinicians.

Job burnout is a specific form of stress that is common among individual who work in the helping profession. Burnout is derived from a disequilibrium between the external working demands and the internal individual resources of the worker (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). This disequilibrium can yield to negative effects such as job absenteeism and burnout. Burnout is defined as the persistent reaction to chronic job stressors that is characterized by three principal components: emotional exhaustion, depersonalization also known as cynicism, and

reduced personal accomplishment or professional ineffectiveness (Maslach,1982). Embriaco, Papazian, Kentish-Barnes, Pochard & Azoulay (2007) found that half of the critical care physicians and one third of critical care nurses who participated in their study reported severe burnout syndrome as measured by the Maslach Burnout Inventory. A recent review on burnout among US critical care clinicians reported that approximately 25% to 33% of nurses and up to 45% physicians manifest symptoms of severe burnout (Moss et al., 2016). Compared with physicians working in other specialties, critical care physicians reported the highest prevalence of burnout, followed closely by emergency medicine physicians (Moss et al., 2016).

Post Traumatic Stress Disorder (PTSD) among critical care clinicians has been explored by Mealer et al., 2006. PTSD can be triggered by the exposure to actual or threatened death, serious injury or sexual violation. According to the Diagnostic and Statistical Manual of Mental Disorders (5th ed), PTSD is characterized by the re-experiencing of the traumatic event (through recurrent dreams or flashback), accompanied by avoidance of memories, feelings or external reminders of the event, negative cognitions and mood, and aggressive, reckless or self-destructive behavior, sleep disturbances or hypervigilance. The study by Mealer et al. (2006) showed that 24% of the ICU nurses tested positive for symptoms of PTSD related to their work environment, compared to only 14% of the general nurses ( $p = 0.03$ ).

Along with the interest in PTSD, some scholars explored the presence of secondary traumatic stress, or vicarious traumatization, among critical care professionals and emergency medicine (Meador et al., 2008; Berg et al., 2016). Secondary traumatic stress was defined by Figley (1995) as the cost deriving from helping suffering or traumatized people. Secondary traumatic stress refers to the presence of PTSD symptoms such as intrusion, avoidance, and arousal, caused by an indirect exposure to traumatic events material due to professional relationship with the traumatized clients. According to a recent review on nurses (Beck 2011), the presence of secondary traumatic stress was reported among nurses working in several settings such emergency, critical care, oncology, pediatrics, and palliative care.

As it is clear from the studies presented above, a large body of research has clearly highlighted the psychological risks concerning the emotional stressors of working in the ICU. Only recently, research has focused on the psychological risks concerning the ethical stressors that are common among the healthcare professionals. In the last ten years the experience of moral distress has received increased attention among critical care professionals, as a form of work-related stress. In the next paragraphs the definition of moral distress will be discussed, along with a description of the main scales implemented to measure it. Finally, literature on the causes and effects of moral distress will be reported.

## **2. Definition of moral distress**

The term “moral distress” was first introduced in 1984 by Andrew Jameton, psychologist and philosopher, when he was studying moral dilemma in nurses. In his research, he interviewed nurses asking them to tell their stories in which they were confronted with moral dilemmas. He found that nurses’ stories did not meet the definition of ethical dilemma, in which there is a conflict between two equally right moral actions. Rather, nurses constantly described situations in which the morally right action was clear to them, but they felt constraints from following what they perceived to be morally right. In his attempt to define this new form of stress, Jameton coined the term moral distress<sup>1</sup> referring to the psychological disequilibrium and negative feelings arising when “one knows the right thing to do, but institutional constraints make it nearly impossible to pursue the right course of action” (Jameton 1984, p. 6). Moral distress is therefore characterized by the experience of not acting accordingly to one’s own professional values and standards. The hallmark of moral distress has been described as the perceived violation of one’s own professional values and

---

<sup>1</sup> According to Lazarus & Folkman, stress has been defined as a relationship with the environment that the person appraises as significant for his or her well-being and in which the demands tax or exceed available coping resources (Lazarus & Folkman, 1986). As it is possible to note from this definition, stress is defined by the person’s perception of the environment and the perceived ability to cope with it. The term distress is generally used to describe the negative form of stress, compared to the term eustress which describes the positive aspects of stress in terms of activation and positive appraisal of the environmental event or coping strategies (Selye, 1974; Le Fevre et al., 2006).

the perceived erosion of professional integrity (Epstein & Hamric, 2009). Examples of morally distressing situations are providing aggressive care to patients, even with no medical benefit, because of the family members' pressures or discharging patients without accurate information because of the hospital policy. An example of a moral distress situation is reported in Box 1.

**Box 1. Example of a moral distress situation** (Epstein & Delgado, 2010)

*Elizabeth is a nurse in an orthopedic unit where the ratio of nurses to patients is one to six. A year ago, the hospital implemented a policy that patients being discharged from surgical services should leave by noon. To encourage adherence to this policy, the discharge coordinators who succeed in discharging at least 75% of their patients by noon are recognized on a bulletin board. Elizabeth has already been involved in several situations in which she questioned the safety of expedited discharge. In one situation, her patient was discharged by another nurse before she had a chance to review his medication list with him [..]Today, Elizabeth is caring for a 76-year-old woman with a hip fracture who will be discharged to her daughter's home. It's 11am, and in discussing the patient's care with her daughter, Elizabeth learns that the daughter works full time and that the patient will be alone at home for most of the day. She calls the discharge coordinator to explain the need for a social work consult but is told, "We decided all this yesterday. She is going home today, and by 12 noon, no later." Elizabeth feels powerless and feels that she is not delivering good quality care.*

To clarify the concept, Jameton (1993) introduced a distinction between moral distress and moral dilemma. Moral distress implies knowing the correct course of action in patient care, but not being able to pursue it, whereas moral dilemma is characterized by not knowing what action to pursue, because we are confronted with a situation where different yet equally important ethical values are at stake.

Since 1984, the definition of moral distress has evolved. Several authors (McCarthy & Dedy, 2008; Hamric, Borchers & Epstein, 2012) suggested that there can be external (institutional) but also internal (psychological) constraints that may prevent clinicians from pursuing what they believe to be right. In other words, the constraint causing moral distress may be internal or external to the individual. The external constraints include lack of time, understaffing, funding availability, inhibiting power structure, lack of collegial support, and organizational priorities that conflict with care needs. The internal constraints, which refer to personal characteristics that can cause moral

distress, include lack of knowledge and assertiveness, perceived powerlessness, self-doubt and socialization pressure to follow others (Hamric, et al., 2012).

Hanna (2005) proposed a broader and more subjective definition by stating that moral distress is “an inner response by the self when there is a perceived threat to an objective good” (p. 117), thus suggesting that it is our own perception of reality that shapes the moral distress experience. Along those lines, other authors argued that moral distress “is not a response to what is unquestionably right, but rather a violation of what the individual judges to be right” (Nathaniel, 2012, p. 299). Although these new definitions have not been frequently adopted in research, they allowed to highlight that it is the presence of perceived constraints, either internal or external, to pursue a perceived good that is typical of the moral distress experience.

The increased theoretical exploration of moral distress has led to an unfortunate broadening of its definition as to include issues such as moral sensitivity or emotional distress, which has blurred the meaning of the original concept (McCarthy & Deady, 2008). However, the vast majority of empirical research on moral distress relied on Jameton’s revisited definition (McCarthy & Deady, 2008; Hamirc et al., 2012), which consider moral distress as a psychological disequilibrium arising for the inability to carry out the action perceived as ethically appropriate because of internal or external constraints.

The concept of moral distress has been initially studied in critical care nursing, setting in which ethical quandaries commonly occur. However, it soon became clear that moral distress was a common experience to other clinical specialties and other healthcare professionals. For this reason, in the last decade, preliminary studies explored moral distress across several clinical settings, such as oncology, midwifery, mental health and military nursing (Lievrouw, Vanheule, Deveugele et al., 2016; Ohnishi, Ohgushi, Nakano et al., 2010; Fry et al., 2002). At the same time, other studies explored the experience of moral distress among other healthcare professionals, such as physicians (Førde & Aasland, 2008), pharmacists (Sporrong, Höglund, & Arnetz, 2006), medical students (Wiggleton et al., 2010), psychologists (Austin, Rankel, Kagan, Bergum, & Lemermeyer, 2005) and

respiratory therapists (Schwenzer & Wang, 2006). Recently, Prottas (2013) explored moral distress among employees thus extending the concept beyond the healthcare setting. However, the research in this area is still at its inception because the scales developed to measure moral distress have been designed for healthcare professionals and are not easily applicable to a different population.

### **3. Measures of moral distress**

Along with the refinement of the concept, several efforts have been made to measure moral distress. The first scale to measure moral distress in nursing, named the *Moral Distress Scale* (MDS), has been developed by Corley, Elswick, Gorman & Clor (2001). The scale was developed based on the Jameton's conceptualization of moral distress (1984), which has been previously described, House and Rizzo's role conflict theory (1972) and Rokeach's beliefs, attitudes and values theory (1968). Role conflict theory suggests that professionals that are subject to conflicting professional expectations coming from multiple authority (e.g. chief doctor and patients) can experience stress (Rizzo, House & Lirtzman, 1970). Rokeach's value theory is a cognitive consistency theory, which indicates that a person's beliefs, attitudes, and values must be in harmony with one another, and suggests that the subject may experience conflict when there is a discrepancy between his/her attitude and behavior (Rokeach, 1968).

The items of the MDS were developed by reviewing research findings on the moral distress of nurses in the hospital settings and by interviewing US staff nurses (Corley, Elswick, Gorman & Clor, 2001). In her work, Corely (2002) identified some commonly cited situations of moral distress among critical care nurses that became the base for item generation, such as continuing life support even though it is not in the patient's best interest, using healthcare resources inappropriately, performing painful procedure to patients for the sake of learning, working with colleagues who are not adequately trained to provide the required care, inadequate pain relief provided to patients, inadequate communication about end-of-life care between providers and

patients and families, and giving false hope to patients and families (Wilkinson 1988; Sundin-Huard & Fahy 1999; Viney, 1996; Kompanije, Piers & Benoit, 2013).

The scale was composed by a total of 32 items describing morally distressing situations. For each item, nurses had to rate their distress on 7-point Likert scales (1=little to 7= great) indicating both frequency and intensity. Frequency and intensity scales were used as separate and a total score was not provided. Exploratory factor analysis confirmed a three-factor solution explaining 19% of the total variance. The factors identified were named as it follows: Individual responsibility, Not in the patient's best interest and Deception.

The MDS had the advantage of providing a scale to measure of moral distress, thus allowing many researchers to quantitatively study the prevalence of the phenomenon and its impact on clinicians' well-being (Elpern, Covert & Kleinpell, 2005; Sauerland, Marotta, Peinemann, Berndt & Robichaux, 2014; Dalmolin, Lunardi, Lunardi, Barlem & Silveira, 2014; Papathanassoglou et al., 2012). However, despite a subsequent revision (Corely, Minick, Elswich & Jacobs, 2005), the MDS presented several limitations. The scale was tested on a sample composed solely by nurses and therefore it was not easily applicable to other professionals. Moreover, from a statistical point of view, its factorial structure was not assessed though a confirmatory factor analysis.

To overcome these limitations, Hamric et al. (2012) developed the *Moral Distress Scale-Revised* (MDS-R) to expand its used to non-ICU settings and make it appropriate for use by different healthcare professionals. Compared to the original scale, the Moral Distress Scale-Revised (MDS-R) was composed of 21 items on a 5-point Likert scale (0=none; 4=very much) and included a composite score given by the frequency and intensity product for each item. The total score ranged from 0 to 336. The MDS-R was tested on a wider sample of US nurses (n=169) and physicians (n=37) working in adult critical care setting in the United States. Nevertheless, to date its factorial validity has not been explored. Two versions of the MDS-R were developed to fit with the adult and pediatric settings. Within each setting, three versions were made available for nurses, physicians and other healthcare professionals. The items content remained the same across the six



versions, although the wording differed according to the context or professional discipline. The adult MDS-R version for physicians is reported in Appendix 1.

Finally, a *Moral Distress Thermometer* (MDT) (Wocial and Weaver, 2013) has also been developed as a time-saving instrument to use in different clinical settings. The moral distress thermometer is a visual analogue scale depicting a thermometer of moral distress, ranging from 0 to 10, with verbal descriptors to anchor the degree of distress (none, mild, uncomfortable, distressing, intense, and worse possible). To complete the MDT, clinicians are asked to assess the level of moral distress that they have been experiencing in the past 2 weeks by marking a number (0–10) on the thermometer. Although the MDT presents a promising and time-effective instrument to measure moral distress in a multidisciplinary setting, its psychometric properties need to be further explored as it presented low to moderate correlations with the MDS.

#### **4. The moral residue and the crescendo effect model**

While moral distress has been defined and measured as a static concept, some authors proposed a dynamic approach to moral distress by introducing the crescendo effect model (Epstein & Hamric, 2009). This model is based on the results of some qualitative studies which observed that after a morally distressing situation is resolved, lingering negative effects may persist (Epstein, 2008). These negative effects have been named variously as “reactive moral distress” by Jameton (1993) and later as “moral residue” by Webster and Bayliss (2000). The crescendo effect model posits that when the situation that elicited moral distress ends, a moral residue remains that is characterized by reactive distress and negative feelings, such as frustration, anger, powerlessness and a sense of erosion of ethical integrity. This moral residue has been defined as “what we carry with us from those times in our lives when in the face of moral distress we have seriously compromised ourselves or allowed ourselves to be compromise” (Webster & Bayliss, 2000, p. 208). If not addressed, moral residue remains serving as a new baseline for moral distress. According to this model, if moral residue is not eliminated, when a new situation of moral distress occurs, this

can evoke stronger reactions and negative emotions that may contribute to a crescendo effect. Although this model has not been empirically tested, some preliminary studies indicate the existence of lingering moral residue in nurses and found a correlation between moral distress and years of nursing practice.

## **5. Contributing factors and effects of moral distress**

### *5.1 Contributing factors of moral distress*

Overall, research that explored the factors that may contribute to moral distress principally used qualitative methods and therefore produced findings with limited generalizability. Some quantitative studies produced initial data that have to be further investigated. Contributing factors of moral distress are generally attributable to three primary sources: individual characteristics, organizational characteristics, and broader external influences (Burston & Tuckett, 2012).

Among the individual characteristics, several studies explored the influence of nursing experience on moral distress. The theoretical hypothesis guiding these studies was that moral distress may build up from cumulative experiences of unaddressed situations. However, these studies produced contradictory results. Pauly, Varcoe & Storch (2009) found no correlation between moral distress and years of nursing experience, whereas a study by Dodeck et al., (2016), which surveyed nurses, physicians and other healthcare professionals, found that moral distress was positively correlated with years of experience only in nurses. Similarly, Elpern, Covert & Kleinpell (2005) found that moral distress of nurses was significantly correlated with their level of experience.

Other individual characteristics, such as expectations regarding the standards of care, moral sensitivity, individual values, cultural background, autonomy, assertiveness and moral courage were all suggested to impact moral distress (Austin, Bergum & Goldberg, 2003; Papathanassoglou *et al.*, 2012; Hamric et al., 2012). However, quantitative studies on their impact are not available. Among

personal characteristics, moral distress was also found to be associated with low levels of psychological empowerment (Browning, 2013).

Although the research on individual factors yielded preliminary and controversial results, research on organizational variables contributing to moral distress produced more consistent findings. Among the organizational factors, literature has mainly focused on the role of ethical climate. A positive ethical climate, characterized by respectful and positive relationships with peers, patients, hospital, managers and physicians, was found to be associated with low levels of moral distress among nurses (Corley Minick & Elswick, 2005; Pauly et al., 2009).

Relational climate among colleagues and the power structure, including hierarchical decision-making processes and imposition of obedience, have been highlighted to contribute to moral distress (Oberle & Huges, 2001). Specifically, the conflicts in the relationships between nurses and physicians are reported to be the most common sources of moral distress, with nurses often feeling powerless to question physicians' decisions and trapped between their responsibility toward the patient and the need to respect physicians' authority (Solum & Schaffer, 2003; Malloy et al., 2009). Other organizational factors contributing to moral distress concern the lack of available resources, unsafe staffing levels, and inadequately trained staff (Ohnishi, Ohgushi & Nakano, 2010).

Among external influences, literature mentions the economic factors including issues of efficiency, cost containment, and resource allocation, access to care, and organizational policy. Broader healthcare regulations and organizational procedures may also constrain clinicians from taking the most ethically appropriate action (Solum & Schaffer, 2003). Finally, clinicians' ability to follow what is right in patient care can be compromised by the interests of third parties such as funding bodies and interagency conflict.

## *5.2 Effects of moral distress*

Moral distress is found to have negative consequences on both clinicians' psychological well-being and organizational well-being. The effects of moral distress on clinicians' well-being have been mainly documented through qualitative studies on nurses. As a consequence of moral distress a host of negative feelings have been reported such as anger, frustration, sadness, powerlessness, guilt and even physical symptoms (Austin et al., 2005; Elpern et al., 2005; Gutierrez, 2005; Elpern, Covert & Kleinpell, 2005; Ferrel, 2006; Zuzelo, 2007). Other qualitative research suggests additional worrying consequences such as diminished confidence, self-doubt and even loss of self-esteem (Wilkinson, 1989; Laabs, 2007). A study involving 22 newly graduated nurses (Kelly 1998) found that their experiences of moral distress was followed by self-disappointment, self-doubt and self-blame when they realized that they may not become the nurses they had wanted to be. This study indicated that, in order to cope with moral distress, nurses adopted several action such as leaving the unit in search of better conditions, working fewer hours, changing career, blaming nursing administration, blaming the hospital system, excusing one's actions, and avoiding patient interaction.

Moral distress was proved to have negative consequences also on organizational outcomes, affecting job satisfaction and retention. A study on 130 psychiatric nurses in Japan (Ando, 2006) reported that moral distress was negatively correlated with the sense of coherence and job satisfaction. Wilkinson (1987) found that the level of nurses' moral distress was associate with their intention to resign from job (Wilkinson, 1987). Similarly, Corely et al., (2001) found that of the 158 nurses who completed the Moral Distress Scale, 15% said that they had left a previous position because of moral distress. Other studies showed that clinicians who are repeatedly exposed to situations in which they feel unable to carry out what they believe to be the ethically appropriate action are at risk for burnout, withdrawal from patient care, conscientious objection, or job resignation (Wilkinson, 1988; Catlin et al., 2008; Meltzer & Huckabay, 2004; Gutierrez, 2005;

Hamric & Blackhall, 2007). Specifically, the frequency of moral distress was found to correlate with emotional exhaustion of the Maslach Burnout Inventory (Meltzer & Huckabay, 2004).

The impact of moral distress on the quality of care provided has not been empirically explored. However, many scholars argued that moral distress is a factor which may cause withdrawal from patients and therefore decrease the quality of care provided (Corley 2002; McCarthy & Deady, 2008; Peter & Liaschenko, 2004). Only one study by Hamric & Blackhall (2007) explored the correlation between nurses' moral distress and their satisfaction with the quality of care provided and found a negative correlation.

Finally, Lützné et al. (2003) argue that much of the research on what they call 'moral stress' has explored only the negative psychological aspects (so called distress) associated with it. They argue, instead, that moral stress can also be seen as an "energizing factor". Consistently, other authors (Hanna, 2004) argue that the experience of moral distress can also be views as "a life challenge that develops moral character" (p 77), making individuals more aware of their own professional, moral, philosophical beliefs and offering them an opportunity for personal growth.

## CHAPTER 2. Systematic review of moral distress and related constructs

### 1. Abstract

**Introduction.** Moral distress has been defined by Jameton (1984) as the painful feeling that occurs when professionals cannot carry out what they believe to be ethically appropriate actions in patient care. This review describes the publication trend on moral distress and explores its relationships with other constructs. **Method.** Journal articles on moral distress published from 1984 to 2014 were identified by searching multiple literature databases related to health, psychology and social sciences. Rigorous inclusion and exclusion criteria were utilized. **Results.** 239 articles were published on moral distress, with an increase after 2011. Most of them (71%) focused on nursing. Of the 239 articles, 17 empirical studies were analyzed. Moral distress correlated with organizational environment (poor ethical climate and collaboration), work well-being (low work satisfaction and engagement) and psychological characteristics (low psychological empowerment and autonomy). Findings revealed that moral distress negatively affects clinicians' well-being and job retention. **Conclusion.** Findings confirm that moral distress is a relevant psychological construct for the well-being of clinicians. However, further studies are needed to better understand protective factors and effect of moral distress in order to develop preventive interventions.

**Keywords:** moral distress, psychological distress, burnout, systematic review, healthcare system.

## **2. Introduction**

The term “moral distress” was first coined by the philosopher Andrew Jameton (1984) and was defined as the negative experience “when one knows the right thing to do, but institutional constraints make it nearly impossible to pursue the right course of action” (p 6). Since this definition, the characteristics and causes of moral distress have been studied and refined by several researchers (McCarthy and Deady, 2008). The main feature that distinguish moral distress from other constructs such as emotional distress, burnout or post-traumatic stress, is the perceived violation of one’s own professional integrity and obligations, and the concurrent feeling of being constrained from taking the ethically appropriate action (Epstein and Hamric, 2009). The first body of research on moral distress originated from nursing. Only recently moral distress has been studied also among other healthcare professionals such as physicians (Førde and Aasland, 2008), pharmacists (Sporrong et al., 2006), medical students (Wiggleton et al., 2010), psychologists (Austin et al., 2005) and employees (Prottas, 2013).

Efforts have been made to elaborate instruments to measure moral distress. The initial Moral Distress Scale (MDS) was developed by Corley et al., (2001) and was used to measure moral distress in critical care nursing. Since then, several revised versions of the MDS has been introduced in different countries (Hamric and Blackhall, 2007; Lazzarin et al., 2012). More recently, Hamric et al. (2012) developed the Moral Distress Scale-Revised to include more causes, expand its use to non ICU settings, and make it appropriate for use by different healthcare professionals. A moral distress thermometer (Wocial and Weaver, 2013) has also been developed as a time-saving instrument to use in different clinical settings.

Because of the increasing body of research on moral distress, several reviews have been recently conducted. Some reviews provided theoretical backgrounds and synthesized the evolution of the concept and its subsequent deployment (Corley, 2002; Hanna, 2004; McCarthy & Deady, 2008; Shepard 2010; McCarthy and Gastmans, 2015). Other reviews summarized the determinants of moral distress and how it could be prevented (Cohen & Erickson, 2006; Burston & Tuckett,

2012; Sasso et al., 2016). A review (Huffman & Rittenmeyer, 2012) focused on the biological, psychological and stress-related consequences of moral distress on nurses and its adverse impact on providing optimal patient care. However, most of these reviews are conceptual or narrative (Hanna, 2004; Schluter et al., 2008; Shepard, 2010; Hamric, 2012) and focus solely on nurses (Cohen & Erickson, 2006; Schluter et al., 2008; Burston & Tuckett, 2012; Shepard, 2010; Huffman & Rittenmeyer, 2012; Sasso et al., 2016). To the best of our knowledge, no systematic review of quantitative studies has been published in order to analyze the relationship between moral distress and other constructs among healthcare professionals.

The present study is the first systematic literature review aimed to: 1) map the development and spread of moral distress in the literature since the concept was first coined; and 2) analyze the relationship between moral distress and other constructs among healthcare professionals. The present review contributes to the current literature by providing a systematic synthesis of the organizational and psychological constructs associated with moral distress. Implications for clinical practice and suggestions for future research will be discussed.

### **3. Methods**

#### **Bibliometric analysis**

A bibliometric analysis was conducted in order to map the temporal and geographical development of publications on moral distress. Bibliometric analyses can offer insights on the status quo and the developmental trends of a concept or a discipline (Quiñones-Vidal et al., 2004; Kirchler & Holzl, 2006).

To include the widest possible range of relevant literature, we performed an electronic literature search consulting 5 major databases in the field of social sciences: PsychInfo, Pubmed, Scopus, Repec/Ideas and Cochrane. As moral distress is a very specific construct, we searched the term “moral distress” only in title. Search in the electronic databases was limited to English-written



publications and journal articles. As one of our aims was to describe the trend of moral distress publications since the concept was first coined, we did not set any time limit in our search.

Data from the different databases were exported in Excel to facilitate data management. A standard data extraction sheet was developed, which included the following information: name of the database, list of authors, publication's title, name of the journal, year of publication, country of the first author, abstract, and article type. If the information required was not retrieved by the database, it was considered missing.

Data were analyzed through descriptive statistics to offer a quantitative map of the temporal and geographical distribution of all the publications on moral distress. All the publications retrieved were also analyzed according to the healthcare setting and profession they referred to. This analysis was performed by reading the articles' titles and abstracts when available.

### **Systematic analysis**

A systematic analysis based on the Cochrane Collaboration guidelines (Higgins and Green, 2011) was then conducted in order to describe the relationship between moral distress and other organizational and psychological constructs. Systematic review of the literature (Petticrew and Roberts, 2006) applies explicit and rigorous methods to identify, critically evaluate and synthesize data from studies in order to reach conclusions based on evidence. Using the database obtained for the bibliometric analysis, we selected the studies that met the following inclusion criteria: 1) studies on moral distress; 2) studies that included at least one other construct beyond moral distress; 3) studies that used a quantitative method; 4) studies that were published on a peer-review and indexed journal; 5) English-written studies; 6) studies with an abstract available. The exclusion criteria were: 1) studies not on healthcare professionals; 2) intervention studies; 3) qualitative studies or reviews; 4) studies on validation of scale/instrument to measure moral distress.

The screening for relevance was based on the publications' abstract. Two researchers independently read all the available abstracts applying the inclusion criteria to make an initial

judgment. Differences concerning inclusion/exclusion criteria were resolved by reading the full-texts and through discussion. If the full-text was not retrievable, the study was excluded. When consensus could not be reached, the final decision was made in a meeting with a third researcher.

The selected articles were then reviewed applying the National Institute for Health and Clinical Excellence's (2012: pp 215) quality appraisal checklist for correlational studies to assess the overall quality of the studies. Studies were excluded if less than 3 checklist criteria out of 5 were fulfilled.

The results of the selected articles were analyzed and synthetically grouped according to the thematic area of the constructs studied.

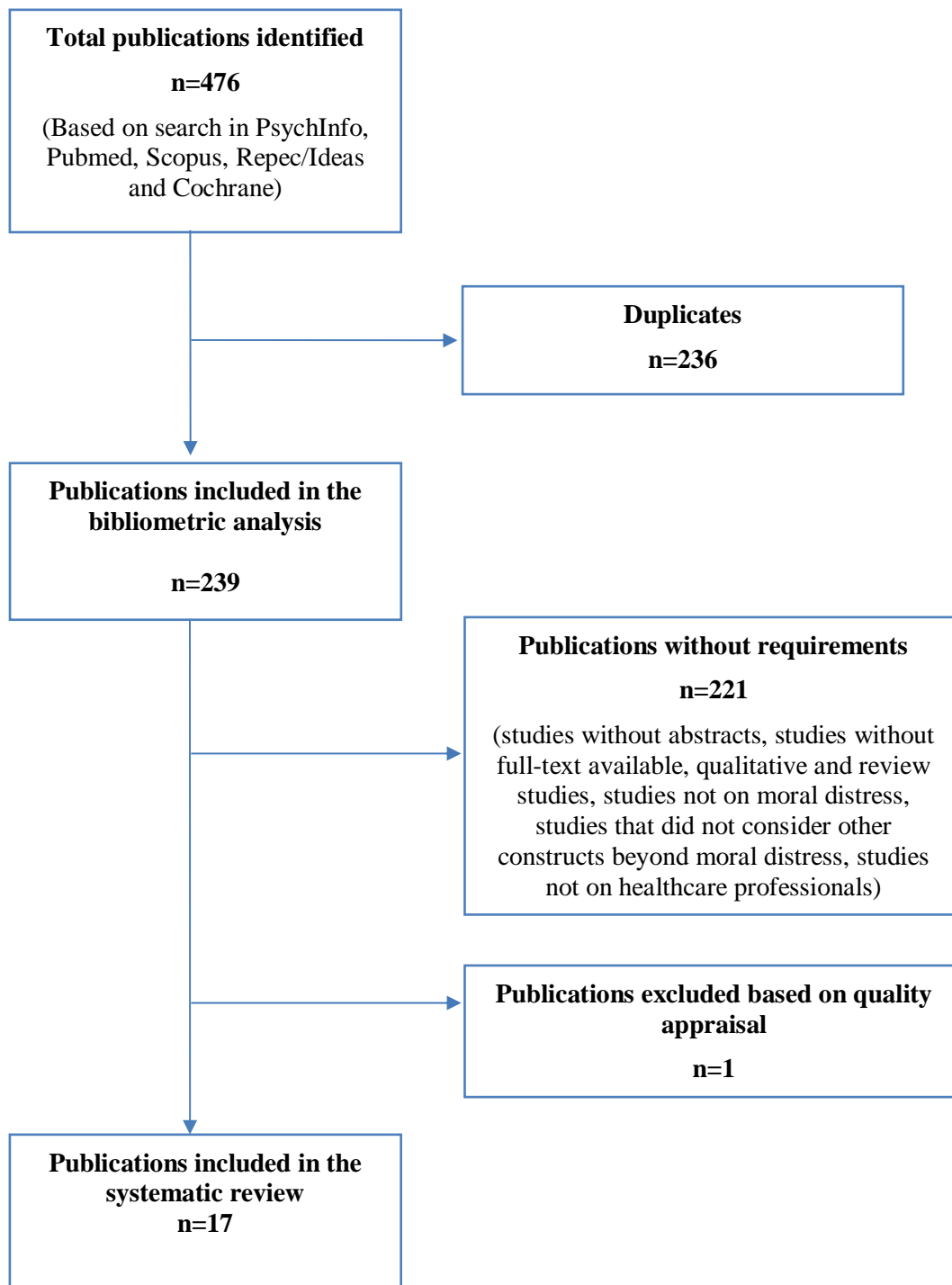
## **4. Results**

### **Literature search and selection**

The electronic bibliographic search was conducted on the 12<sup>th</sup> of June 2014. The flow diagram of the publications' selection process is depicted in Table 1. The database search identified 476 publications. After removal of duplicates, a total of 239 publications were considered for the bibliometric analysis.

For the systematic analysis, of the 239 publications, 108 were excluded because they had no abstract available. Of the remainder 131 publications, 113 studies were excluded based on abstract screening because did not meet the inclusion criteria (n=31 were theoretical studies; n=25 were qualitative studies; n=21 focused only on moral distress and did not include other constructs; n=9 were not on moral distress and focused on moral sensitivity or moral dilemmas; n=8 were single case articles; n=7 focused on validating measures of moral distress; n=6 were conceptual reviews; n=4 were intervention studies; n=1 the full-text was not in English; n=1 did not involve healthcare professionals). One study was then excluded based on the quality appraisal checklist. Finally 17 publications were included in the systematic review (Table 2).

**Table 1. Flow diagram of literature search and selection of publications**



**Table 2. Results of the studies included in the systematic review**

Author, year	Country	Subjects	Variables observed	Measures	Results
Corley <i>et al.</i> , 2005	US	Nurses in medical and surgical units (n=106)	Moral Distress Ethical work environment	Moral Distress Scale (Corely et al. 2005) Ethics Environment Questionnaire (McDaniel 1997)	MD frequency was negatively correlated with ethical work environment ( $r=-0.215$ ; $p=0.05$ ); MD intensity was predicted by ethical work environment ( $F=1.65$ ; $p=0.038$ )
Hamric and Blackhall, 2007	US	ICU physicians (n=29) and nurses (n=196)	Moral distress Ethical work environment Collaboration Satisfaction with quality of care	Moral Distress Scale (Hamric and Blackhall 2007) Ethics Environment Questionnaire (McDaniel 1997) Adapted version of Hojat's questionnaire (Hojat et al. 1999) Questions developed by the author	For MDs, MD was not correlated to satisfaction and ethical environment. For RNs, MD was negatively correlated with satisfaction ( $r= -0.34$ ; $p=0.003$ ) and collaboration ( $r= -0.22$ ; $p=0.05$ ) RNs with high MD had lower satisfaction scores ( $F=16.52$ ; $p<0.001$ ), lower ethical environment scores ( $F=8.04$ ; $p<0.001$ ), and lower collaboration scores ( $F=5.03$ ; $p=0.008$ ) than RNs with lower MD.
Pauly <i>et al.</i> , 2009	Canada	Nurses working in acute care hospitals (n=374)	Moral distress Ethical climate	Moral Distress Scale (Corley et al. 2005) Hospital Ethical Climate Survey (Olson, 1998)	Total MD ( $r = -0.420$ ; $p < 0.01$ ), MD intensity ( $r = -0.160$ ; $p < 0.01$ ) and MD frequency ( $r = -0.419$ ; $p < 0.01$ ) were negatively correlated with hospital ethical climate
Ohnishi <i>et al.</i> , 2010	Japan	Psychiatric nurses (n=391)	Moral distress Burn out	Moral Distress Scale for Psychiatric Nurses (developed by the authors based on Corely et al. 2001) Maslach Burnout Inventory-General Survey (Maslach et al. 1996)	MD predicted burnout dimensions: exhaustion ( $\beta=0.29$ ; $p<0.001$ ), cynicism ( $\beta=0.38$ ; $p<0.001$ ) and professional efficacy ( $\beta=0.15$ ; $p<0.05$ )
McAndrew <i>et al.</i> , 2011	US	ICU nurses (n=78)	Moral distress Professional practice environment	Moral Distress Scale (Corley et al., 2005) Practice Environment Scale (Lake 2002)	MD intensity was negatively correlated with MDs/RNs relationships ( $r = -0.25$ , $p=0.03$ ) MD frequency was negatively correlated with participation in hospital affair ( $r = -0.34$ , $p<0.01$ ), leadership and support ( $r = -0.32$ , $p<0.01$ ), resources and staffing adequacy ( $r = -0.25$ , $p<0.05$ ) and MDs/RNs relationships ( $r = -0.30$ , $p<0.01$ ) MD frequency predicted professional practice environment ( $R^2=0.11$ , $F = 6.91$ , $p = 0.01$ )
Lawrence, 2011	US	Adult and pediatric ICU nurses (n=28)	Moral distress Critical reflective	Moral Distress Scale-subscale (Corely et al. 2005) Reflection-Rumination Questionnaire and	MD was not correlated with critical reflective practice MD was negatively correlated with work engagement ( $r= -0.48$ ; $p=0.05$ )

			practice Work engagement	Critical Reflective Practice Questionnaire (developed by the author) Utrecht Work Engagement Scale	
Silen <i>et al.</i> , 2011	Sweden	Nurses (n=249)	Moral distress (MD) Hospital ethical climate	Moral Distress Scale (Corley et al., 2005) Hospital Ethical Climate Survey (Olson, 1998)	MD frequency was negatively correlated with hospital ethical climate ( $r = -0.328$ , $p < 0.001$ )
Ganz <i>et al.</i> , 2012	US	Adult and pediatric ICU nurses (n=291)	Moral distress Structural empowerment	Moral Distress Scale (Corley et al., 2005) Conditions of Work Effectiveness Questionnaire II (Laschinger et al. 2001)	MD frequency was negatively correlated with general structural empowerment ( $r = -0.18$ , $p < 0.004$ ) MD frequency was predicted by type of unit and access to resources ( $F=8.46$ ; $p=0.0001$ )
Papathanassoglou <i>et al.</i> , 2012	Several European countries	ICU nurses (n=255)	Moral distress Autonomy Nurse-physician collaboration Job characteristics and satisfaction	Moral Distress Scale (Corley et al., 2001) Varjus's Autonomy Scale (2003) Collaboration and Satisfaction about Care Decisions Scale (Baggs 1992) Questions developed by authors	MD was negatively correlated with collaboration ( $r = -0.337$ ; $p < 0.001$ ) and with action scale of autonomy ( $r = -0.208$ ; $p = 0.02$ ) MD frequency was positively correlated with patient-nurse ratios ( $r = 0.262-0.312$ ; $p < 0.001$ ) and negatively with perceived value given to the ICU nurse status ( $r = -0.300$ ; $p < 0.001$ ) MD was positively correlated with intention to resign ( $r = 0.229$ ; $p = 0.01$ )
Piers <i>et al.</i> , 2012	Belgium	Geriatric nurses (n=222)	Moral distress Work environment Burnout Job-leave	Moral Distress Scale (Hamric and Blackhall 2007) Questionnaire developed by the authors Maslach Burnout Inventory 1 item developed by the authors	Low total MD was predicted by working in the chronic geriatric care setting compared with the acute care setting ( $\beta = -9.522$ , $p = 0.015$ ); high total MD was predicted by: lack of debate on ethical problems ( $\beta = 11.574$ , $p = 0.019$ ), emotional exhaustion ( $\beta = 7.259$ , $p = 0.003$ ) and personal accomplishment ( $\beta = 6.325$ , $p = 0.004$ ). Total MD was higher in RNs with intentional or actual job-leave than in RNs without this intention ( $t = -3.5$ , $p = 0.001$ )
Browning, 2013	US	Adult ICU nurses (n=277)	Moral distress Psychological empowerment	Moral Distress Scale (Corley et al., 2001) Psychological Empowerment Instrument (Spreitzer, 1995)	MD frequency was negatively correlated with RNs' collaboration in end-of-life patient care conferences ( $r = -0.191$ , $P = .007$ ). MD frequency was negatively correlated with psychological empowerment ( $r = -0.194$ , $P = .01$ ). MD frequency was predicted by poor psychological empowerment ( $\beta = 0.222$ , $p < 0.01$ )
De Veer <i>et al.</i> , 2013	Netherlands	Nurses in nursing homes, home care and acute care hospitals (n=365)	Moral distress Job characteristics Job satisfaction	Questionnaire developed by the authors Validated scales or single items Maastrichtse Arbeidsvoldoening Schaal voor de GezondheidsZorg (short version Landeweerd et al., 1996)	MD intensity was predicted by: working 30 h and above/week ( $\beta = -0.11$ , $p = 0.022$ ); job related stress ( $\beta = 0.33$ , $p = 0.000$ ); satisfaction with consult with colleagues ( $\beta = -0.11$ , $p = 0.003$ ); instrumental leadership ( $\beta = 0.15$ , $p = 0.029$ ). MD was negatively correlated with job satisfaction ( $r = -0.34$ , $p < 0.000$ ) and general grading scores for job ( $r = -0.28$ , $p < 0.000$ ).

Dalmolin <i>et al.</i> , 2014	Brazil	Nurses (n=375)	Moral distress Burnout	Moral Distress Scale (adapted by authors based on Corely et al., 2001) Maslach Burnout Inventory (adapted by authors based on Maslach et al., 1996)	MD was positively correlated with burnout ( $r = 0.102$ , $p = 0.049$ ) MD was predicted by professional fulfillment ( $\beta = -0.107$ , $p = 0.039$ ).
Hamaideh, 2014	Jordan	Mental health nurses (n=130)	Moral distress Burnout Job satisfaction	Moral Distress Scale for Psychiatric Nurses (Ohnishi et al., 2010) Maslach Burnout Inventory (Maslach et al., 1996) Job Satisfaction Scale (Quinn and Shepard, 1974)	Total MD was positively correlated with burnout ( $r = 0.193$ , $p < 0.05$ ) Job satisfaction did not correlate with MD MD was predicted by caseload ( $\beta = -0.244$ , $p = 0.003$ ) and burnout ( $\beta = 0.169$ , $p = 0.029$ ).
Karanikola <i>et al.</i> , 2014	Italy	ICU nurses (n=566)	Moral Distress Autonomy Nurse-physician collaboration Work satisfaction Intention to resign Workload	Moral Distress Scale (Hamric and Blackhall 2007) Varjus's Autonomy Scale (2003) Collaboration and Satisfaction About Care Decisions Scale (Bagg 1992) Question developed by the author Question developed by the author Clinician per patient ratio	MD frequency ( $r = -0.169$ ; $p < 0.0001$ ) and severity ( $r = -0.215$ ; $p < 0.0001$ ) were negatively correlated with collaboration. MD frequency was negatively correlated with the knowledge subscale of autonomy ( $r = -0.134$ ; $p = 0.004$ ). MD intensity was negatively correlated with work satisfaction ( $r = -0.117$ ; $p = 0.012$ ) and positively with the intention to resign ( $r = 0.244$ ; $p < 0.0001$ ). MD severity was negatively correlated with work satisfaction ( $r = -0.144$ ; $p = 0.003$ ). MD severity was positively correlated with intention to resign ( $r = 0.244$ ; $p < 0.0001$ ) and patient-nurse ratio across all 3 shifts ( $r = 0.163-0.204$ ; $p < 0.0001$ ).
Mason <i>et al.</i> , 2014	US	Adult surgical ICU nurses (n=26)	Moral distress Compassion satisfaction Compassion fatigue (burnout) Work engagement	Moral Distress Scale-subscale (Corley et al., 2005) Professional Quality of Life Scale (Stamm, 2009) Utrecht Work Engagement Scale (short version 2008)	No correlation between MD and work engagement, compassion satisfaction and compassion fatigue (burn out)
Sauerland <i>et al.</i> , 2014	US	Adult ICU nurses (n=225)	Moral distress Hospital Ethical Climate	Moral Distress Scale (Corley et al., 2001) Hospital Ethical Climate Survey (Olson, 1998)	Total MD was negatively correlated with ethical climate ( $r = -0.51$ , $p < 0.001$ )

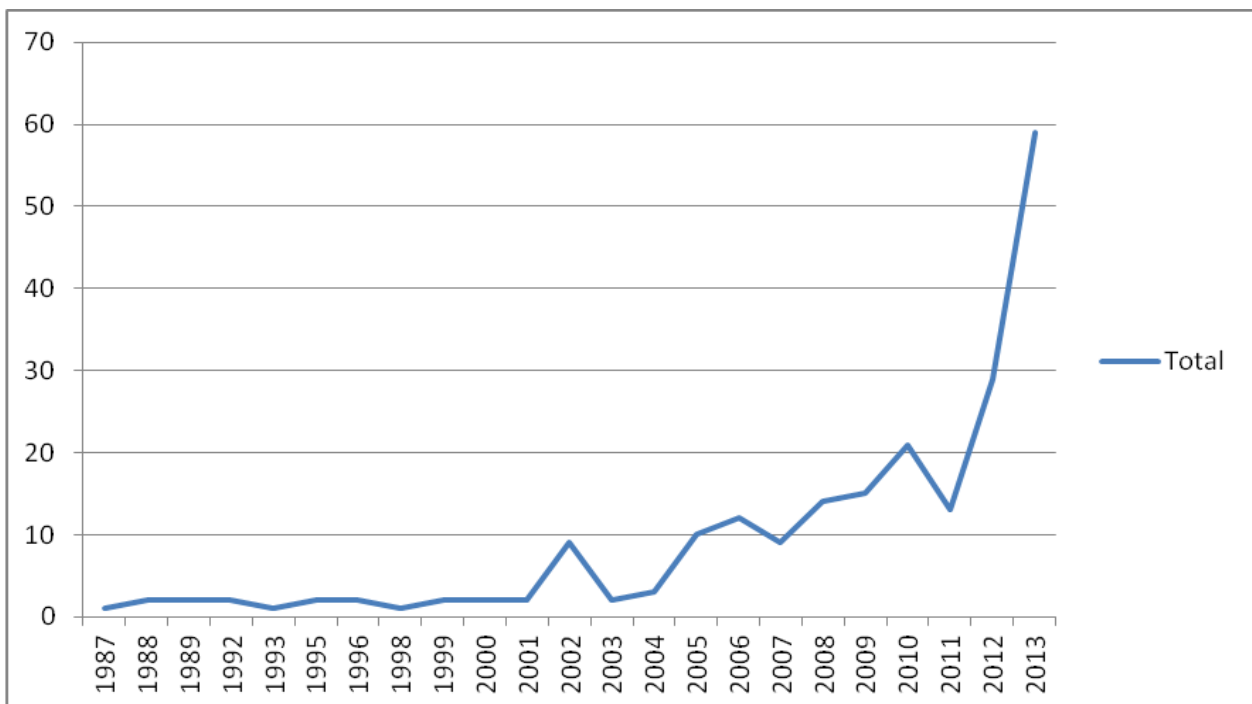
\* We solely selected the results related to moral distress and its association with other constructs. Statistical values reported in the tables are those reported by the authors

## Developmental trend and spread of moral distress

### *Temporal distribution*

The temporal trend of publications on moral distress is reported in Figure 1. The first article was published in 1987 and 52% (n=125) of all the articles were published between 2011-2013. Publications of 2014 are not reported because at the time of the search the year was not over.

**Figure 1. Number of publications on moral distress per year\***

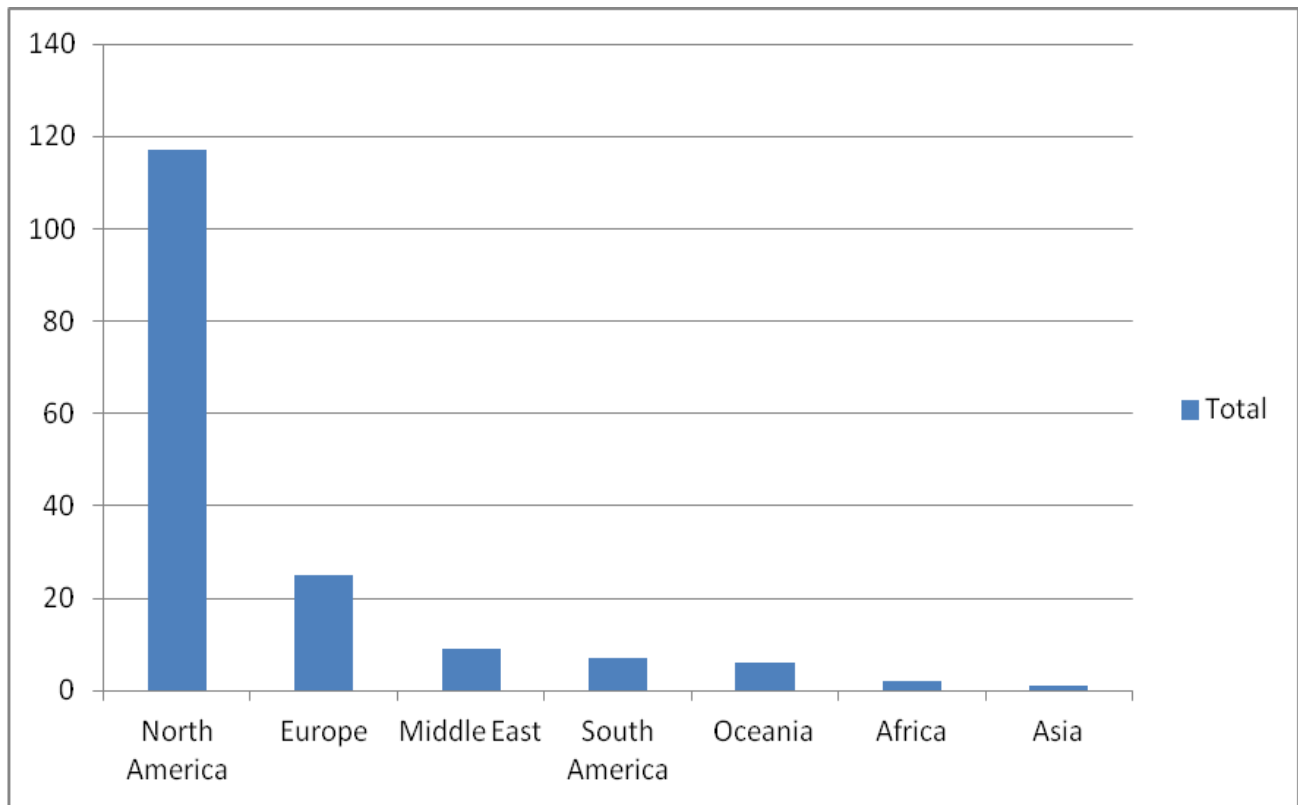


\*As the analysis was conducted on June 2014, the 2014 publications are not reported in the figure because their number is not representative of the whole year.

### *Geographical distribution*

Geographical distribution of publications on moral distress is reported in Figure 2. Publications came from North America (n=117; 70%), Europe (n=24; 15%), Middle East (n=9; 5%), South America (n=7; 4%), Oceania (n=6; 4%), Africa (n=2; 1%), and Asia (n=1; 1%).

**Figure 2. Geographical distribution of publications on moral distress**



### *Setting and professional distribution*

Most of the publications (n=65; 35%) were related to critical care settings such as intensive care, anesthesia and emergency medicine. Publications were also related to the field of healthcare in general (n=30; 16%), academic training (n=12; 7%), mental health (n=10; 5%), chronic care such as HIV, geriatrics and long-term care (n=8; 4%), palliative care (n=8; 4%), oncology (n=7; 4%), surgery (n=4; 2%), organ donation (n=4; 2%), pharmacy (n=3; 2%), administration and healthcare industry (n=3; 2%), gynecology and pediatrics (n=3; 2%), uninsured healthcare (n=3; 2%), rehabilitation (n=2; 1%), respiratory care (n=2; 1%), podiatry (n=2; 1%), neuroscience (n=1; 0,5%) and military nursing (n=1; 0,5%). In 16 (9%) publications, the studies involved several units.

The majority of the publications were related to nurses (n=141; 69%) and nursing students (n=4; 2%). Other publications referred to healthcare professionals (n=14; 6%), clinicians (n=8; 4%), physicians (n=8; 4%), medical students and residents (n=6; 3%), pharmacists (n=6; 3%), healthcare managers (n=3; 1%), psychiatrists and psychologists (n=3; 1%), educators (n=2; 1%), ethicists



(n=1; 0,5%), obstetrics (n=1; 0,5%), palliative care team (n=1; 0,5%), physical therapists (n=1; 0,5%), physician's assistants (n=1; 0,5%), podiatrists (n=1; 0,5%), rehabilitation professionals (n=1; 0,5%), respiratory therapists (n=1; 0,5%), allied healthcare providers (n=1; 0,5%), employee (n=1; 0,5%), healthcare researchers (n=1; 0,5%), and patients' family members (n=1; 0,5%).

## **Moral distress and organizational and psychological factors**

### *Moral distress and organizational environment*

Several studies explored the relationship between moral distress and organizational aspects such as ethical climate, nurse-physician collaboration and job characteristics.

Research on nurses found that moral distress was associated with perceived poor ethical climate, such as lack of support from peers and managers in dealing with difficult patient care, lack of respect for colleagues or patients and lack of involvement in decision making (Corley et al., 2005; Hamric and Blackhall, 2007; Pauly et al., 2009; Silén et al., 2011; Sauerland et al., 2014). The only study that included also physicians did not found a correlation between moral distress and ethical climate in this professional group (Hamric and Blackhall, 2007). A study by Piers et al., (2012) found that a lack of ethical debate predicted moral distress in nurses.

Research that explored the relationship between moral distress and collaboration found that moral distress was associated with poor nurse-physician collaboration (Hamric and Blackhall, 2007; Papathanassoglu et al., 2012; Karanikola et al., 2014) and lack of support from colleagues (McAndrew et al., 2011). Low satisfaction with the possibility to consult with colleagues (De Veer et al., 2013) and poor professional practice environment (McAndrews et al., 2011) were found to predict moral distress.

As to the job characteristics, the relationship between caseload and moral distress is controversial: having many patients per nurse was found to be directly associated with moral distress (Papathanassoglou et al., 2012; Karanikola et al., 2014), whereas lower caseload was found to predict moral distress by Hamaideh (2014). Working in acute care settings (Piers et al., 2012),

working less than 30 hours per week, not having enough time available for patients and experiencing instrumental leadership (De Veer et al., 2013) were found to predict moral distress.

#### *Moral distress and professional attitudes*

Some studies explored the relationship between moral distress and professional attitudes such as job satisfaction, intention to leave the position, work engagement and burnout.

Among nurses, moral distress was associated with decreased job satisfaction (De Veer et al., 2013; Karanikola et al., 2014) and decreased satisfaction with the quality of care provided (Hamric and Blackhall, 2007). Only one study on nurses (Hamaideh, 2014) did not find a correlation between moral distress and job satisfaction. The study by Hamric and Blackhall (2007) did not find this relationship among physicians. Several studies found a correlation between moral distress and intention to resign or actual job leave (Papathanassoglu et al., 2012; Piers et al., 2012; Karanikola et al., 2014).

One study (Lawrence, 2011) found that moral distress was associated with low levels of work engagement, while another one (Mason et al., 2014) did not find any correlation.

Moral distress was found to be associated with burnout (Dalmolin et al., 2014; Hamaideh, 2014) but this finding was not confirmed by Mason et al. (2014). Some studies found that some burnout dimensions predicted moral distress (Piers et al., 2012; Dalmolin et al., 2014; Hamaideh, 2014), while one study found the opposite relationship with moral distress predicting burnout (Ohnishi et al., 2010).

#### *Moral distress and psychological characteristics*

Some studies focused on the relationship between moral distress and individual psychological resources or characteristics such as empowerment, autonomy and self-reflection.

Moral distress was found to be associated with low levels of structural empowerment described as the ability to access sources of power (Ganz et al., 2012) and with low levels of

psychological empowerment (Browning, 2013). Poor access to resources (Ganz et al., 2012) and poor psychological empowerment (Browning, 2013) predicted moral distress. Moreover, moral distress was correlated with low levels of autonomy both on the knowledge (Karanikola et al., 2014) and the action subscales (Papathanassoglou et al., 2012).

For what concerns self-reflection, a study by Lawrence (2011) found no correlation between moral distress and critical reflective practice defined as being mindful of self within or after professional practice situations.

## **5. Discussion**

Over the last years, moral distress received increasing attention in the healthcare literature. The present review constitutes the first attempt to map the trend of moral distress publications since 1984 and systemically analyze the relationship between moral distress and other constructs among healthcare professionals.

Our review showed an increased interest in moral distress over the last 5 years, especially in North America, as indicated by the increased number of publications after 2011. It is possible that the recent attention paid to the broader themes of professionalism, ethical practice and professional integrity in the American literature (American Board of Internal Medicine Foundation, 2002; Epstein and Hundert, 2002) might have shed light on this specific distressing experience. In addition, mounting demands of administrators, insurance companies and patients' families may have increased the healthcare professionals' feeling of being "trapped" and unable to do what they believe is ethically right (Chen, 2009).

We found that a large number of qualitative and quantitative studies have been published, that explore the inner experience and incidence of moral distress. Publications have been mainly focused on nurses working in critical care settings. It is possible that the physical nearness inherent in the nurse-patient relationship and the ethical aspects embedded in end-of-life care have made moral

distress a relevant experience for nurses and for clinicians working in acute care settings (Peter and Liaschenko, 2004). These findings suggest that the knowledge regarding the personal experience and incidence of moral distress is now consolidated especially in the field of nursing and critical care. We noted an initial scientific interest towards moral distress in disciplines other than nursing, as hoped for by several authors (McCarthy and Deady, 2008). We believe that moral distress, as a specific distressing experience, holds promises as an interdisciplinary area of research which is applicable to several professional contexts such as medicine, psychology, and business. The experience of acting not accordingly to what one believes is professionally right because of internal or external constraints, is indeed common to several professional contexts. A study by Austin et al. (2005) focusing on moral distress in psychiatric and mental health care settings, reported that psychologists described several incidents in which they felt their integrity had been compromised. Another study (Nuttgens and Chang, 2013) exploring moral distress within counselling supervisory relationships suggested that moral distress can result from supervisee vulnerability, substandard supervision, supervisee non-disclosure, and organizational pressures. Also in organizations, employees happen to manage situations where they observed inconsistencies between budget allocations and management responsibilities or where organizational priorities did not align with their personal values (Mitton et al., 2010). Future studies could further explore the experience of moral distress in medicine, psychology and organizational sciences. As the current instruments to assess moral distress are constructed for healthcare settings, future measures should also be developed to quantitatively explore moral distress in other professional settings.

The studies included in the review generally reported coherent results despite the use of different moral distress scales and different sample sizes. The findings of these studies suggest that moral distress is related to work environment, clinicians' psychological characteristics and professional attitudes. Studies that explored the relationship between moral distress and work environment found moral distress to be associated with poor ethical climate, low levels of collaboration and support from colleagues and lack of ethical debate (Corley et al., 2005; Hamric

and Blackhall, 2007; Piers et al., 2012). The role of organizational factors in determining moral distress is well documented (Burston & Tuckett, 2012; Sasso et al., 2016) and is consistent with theoretical studies on moral distress causes (Hamric et al., 2012). However, the studies in our review reported controversial results regarding the impact of workload. Further research should be conducted to determine whether having fewer patients contributes to moral distress as it may increase the knowledge and sharing of the patient's situation. Moreover, several organizational factors remain unexplored, such as the congruence between the individual and the organizational values, the level of job control, and the emotional workload.

At a theoretical level, individual factors such as lack of knowledge and assertiveness, perceived powerlessness and self-doubt have been acknowledged to contribute to moral distress (Hamric et al., 2012). However, we found only few empirical studies exploring the relationship between psychological characteristics and moral distress (Lawrence, 2011; Browning, 2013). These studies found that moral distress was related to poor psychological empowerment and low levels of autonomy. The role of other individual factors such as personal beliefs, coping strategies and personality traits remains a little explored area in the literature. As research showed that coping strategies and personality traits are related to clinical stress among healthcare professionals (Tully, 2004; Burgess et al., 2010; Jimenez et al., 2010), this could be a promising area of research applied to moral distress.

The studies analysed in this review indicate that moral distress has a negative impact on healthcare professionals' professional attitudes as it is related to poor job satisfaction, poor satisfaction with quality of care provided and burnout (De Veer et al., 2013; Karanikola et al., 2014; Hamaideh, 2014). Consistently, several qualitative studies reported that, as a consequence of moral distress, clinicians might experience anger, frustration, guilt (Austin et al., 2005; Elpern et al., 2005; Gutierrez, 2005; Zuzelo, 2007), and intention to resign from job (Wilkinson, 1987). According to the "crescendo effect" model of Epstein and Hamric (2009), repeated and unaddressed episodes of moral distress over time cause a moral residue that constitutes a vulnerability factor. If the distress

is not resolved, a residue of moral distress lingers and new morally distressing situations can evoke stronger reactions (Epstein and Hamric, 2009). These findings call for a greater attention to the phenomenon of moral distress as it may compromise clinicians' job retention on the long term.

In a time of budgetary cuts, the findings of this review highlight the importance for healthcare managers to invest in intangible goods, such as cultivating positive ethical climate, team collaboration and support in order to prevent moral distress and increase job satisfaction. Additionally, as individual factors have been shown to play a role in experiencing moral distress, it can be useful for healthcare organizations to promote educational and supportive interventions aimed at enhancing clinicians' empowerment, autonomy and ethical knowledge. A number of interventions such as ethics rounds, supervisions and counseling have been recommended in the literature to decrease moral distress and cope with ethically distressing situations (Rushton, 2006; Beumer, 2008; Leggett et al., 2013; Molazem et al., 2013).

Interestingly, none of the studies included in the review explored the impact of moral distress on the quality of care provided. It is possible that healthcare professionals experiencing moral distress might decrease interactions with patients or family members, in an attempt to distance themselves from the pain and distress experienced (Gutierrez, 2005). Future research is necessary to empirically study whether moral distress directly impacts on the quality of care. This research area could be particularly compelling for healthcare organizations committed to promote high standards of care.

Although the studies included in the review were conducted according to quality standards, most of them were correlational and thus they did not provide information on the causality of the relationships between moral distress and other constructs. In a field that is so rich theoretically, more sophisticated data analytic approaches such as regressions and structural equation modelling should be integrated in future research to clarify whether the constructs analyzed are causes or effects of moral distress. Only by developing an explicatory model it is possible to craft evidence-

based preventive interventions to address the organizational or psychological causes of moral distress (Rushton et al., 2013).

This review is subject to a number of limitations. In the review we included only quantitative studies. Although qualitative studies on moral distress abound and provide important information, we focused on quantitative studies in order to provide a synthesis of the relationship between moral distress and other psychological and organizational constructs, which is missing in the literature. The review findings are based on 17 studies. This small number attests to the fact that the relationship between moral distress and other constructs is understudied. Finally, as the search was conducted on 5 major databases there is the risk of not having accessed to relevant studies that were not published in traditional outlets or were not English-written.

## CHAPTER 3. Study 1. Validation of the Italian Moral Distress Scale-Revised (MDS-R) among critical care clinicians

### 1. Abstract

**Introduction.** Moral distress is the painful feeling experienced by clinicians when they can not pursue what they believe to be the right action in patient care. Most of the quantitative studies on moral distress have been based on the Moral Distress Scale (MDS) and its revised version (MDS-R). However, these two scales have never been validated through factor analysis. This paper aims to fill this gap by exploring the factorial structure of the MDS-R and developing a valid and reliable scale through confirmatory factor analysis. **Method.** The MDS-R was translated into Italian and administered to 184 Italian critical care physicians, nurses and residents along with a measure of depression (BDI-II) to establish convergent validity. Exploratory factor analysis (EFA) was conducted to explore MDS-R factorial structure. Items with low ( $\leq .350$ ) or multiple saturations were removed. The resulting model was tested through confirmatory factor analysis (CFA). **Results.** The Italian MDS-R is composed of 14 items referring to 4 factors: Futile care, Poor teamwork, Deceptive communication, and Ethical Misconduct. This model accounts for 59% of the total variance and presents a good fit with the data (RMSEA=.06; CFI=.95; TLI=.94; WRMR=.65). The Italian MDS-R presents good reliability ( $\alpha=.81$ ) and correlates with BDI-II ( $r=.293$ ;  $p=.000$ ). **Conclusions.** The Italian MDS-R is a valid, reliable and economic instrument to assess moral distress across physicians, nurses and residents. Further research is needed to test the generalizability of its factorial structure in other cultures and assess the impact of moral distress on clinicians' well-being.

**Keywords:** Questionnaire validation, Moral distress, Ethics, Occupational health, Critical care.



## **2. Introduction**

Caring for critically ill patients is an emotionally demanding job. Several studies found that healthcare professionals working in critical care settings often report high rate of depressive symptoms and burnout (Embriaco et al., 2012; Embriaco et al., 2007). Among the factors that affect clinicians' psychological well-being, moral distress has received an increasing attention (Lamiani, Borghi & Argentero, 2015; Prentice, Janvier, Gillam & Davis, 2016).

Moral distress has been defined by Jameton (1984) as the painful feeling that occurs when healthcare professionals cannot carry on what they believe is the ethically correct action because of institutional constraints. Moral distress differs from emotional distress as it relates to the ethical dimension of care, and from ethical dilemma as there are not conflicting values at stake and the ethically right action is known (Epstein & Hamric, 2009; Corley, 2002). The distinctive feature of moral distress is therefore a conflict between actual practice and the clinicians' value system of delivering optimal patient care, concurrent with a perceived violation of one's professional values and duties (Epstein & Hamric, 2009). Literature identified some psychological or organizational factors that may prevent clinicians from pursuing what they believe to be the ethically correct action. These include a lack of assertiveness or autonomy, socialization pressures to follow others, lack of time, inhibiting power structure, lack of collegial support, and organizational priorities that conflict with care needs (Hamric, Borchers & Epstein, 2012).

The symptoms of moral distress have been initially documented through qualitative studies on nurses. These studies revealed that experience of moral distress is characterized by frustration, guilt, powerlessness, sadness and even physical symptoms (Wilkinson, 1988; Elpern, Covert & Kleinpell, 2005; Ferrel, 2006). Other quantitative studies showed that clinicians who are repeatedly exposed to situations in which they feel unable to carry out what they believe to be the ethically appropriate action are at risk for burnout, withdrawal from patient care, conscientious objection, or job resignation (Wilkinson, 1988; Catlin et al., 2008; Meltzer & Huckabay, 2004; Gutierrez, 2005; Hamric & Blackhall, 2007).

The first measure of moral distress, the Moral Distress Scale (MDS), was developed by Corley, Elswick, Gorman and Clor (2001) based on the Jameton conceptualization of moral distress (1984), House and Rizzo's role conflict theory (1972) and Rokeach's beliefs, attitudes and values theory (1968). Role conflict theory suggests that professionals that are subject to conflicting professional expectations coming from multiple authority (e.g. chief doctor and patients) can experience stress (Rizzo, House & Lirtzman, 1970). Rokeach's value theory is a cognitive consistency theory, which indicates that a person's beliefs, attitudes, and values must be in harmony with one another, and suggests that the subject may experience conflict when there is a discrepancy between his/her attitude and behavior (Rokeach, 1968).

The MDS was composed of 32 items describing morally distressing situations as following the family's wishes to continue life support even when it is not in the best interest of the patient, or ignoring situations in which patients have not received adequate information for informed consent. Clinicians have to rate on a 7-point Likert scale how frequent and how distressing each situation is. The MDS was the first measurement of moral distress, and allowed many quantitative studies to explore its prevalence and impact on nurses' well-being (Elpern, Covert & Kleinpell, 2005; Sauerland, Marotta, Peinemann, Berndt & Robichaux, 2014; Dalmolin, Lunardi, Lunardi, Barlem & Silveira, 2014; Papathanassoglou et al., 2012). However, the MDS was tested on a sample solely of nurses and its factorial structure, which explained only 19% of the total variance, was not assessed through confirmatory factor analysis.

Recently, a revised version of the MDS was developed by Hamric et al. (2012). The MDS-R is shorter than the MDS and was used on a sample of nurses and physicians. However, its structural and convergent validity has not been tested.

Structural and convergent validity are pivotal components of construct validity, that is, the degree to which a test measures what it claims to be measuring (Cronbach & Meehl, 1955). Structural validity explores the internal structure of the test items and is usually assessed through

factor analysis. Convergent validity is measured by exploring the correlation between the test and similar constructs (Messick, 1995).

The aims of this study were to develop and validate the Italian version of MDS-R on a sample of critical care clinicians. Structural validity was explored through exploratory and confirmatory factor analysis. Given that sadness has been described as a feature of moral distress (Musto, Rodney & Vanderheide, 2015), convergent validity was assessed by exploring the relationship between moral distress and depression (Beck, Steer, Ball & Ranieri, 1996). Differences in moral distress according to socio-demographic characteristics were finally explored.

### **3. Methods**

#### **Procedures**

Data were collected as a part of a larger study on moral distress in 8 adult medical-surgical Intensive Care Units (ICU) in the North of Italy. Physicians, residents and nurses were requested to fill in a battery composed of a series of questionnaires investigating work-related and socio-demographic variables, moral distress, and depression. The questionnaire was completed during working hours within a two-week period at a time agreed in advance with the doctor in chief and the nurse manager of each unit. Participation was on a voluntary basis. Data collection took place between January 2015 and December 2015.

#### **Instruments**

##### *Socio-demographic characteristics*

In the first section of the questionnaire, participants were asked to provide socio-demographic information regarding their age, gender, profession, years of experience in ICU, and intention to leave the job. Intention to leave the job was formulated as a dichotomous item (yes/no).

### *The Moral Distress Scale-Revised (MDS-R)*

The MDS-R is composed by 21 items that describes morally distressing situations (Appendix 1). Each item is scored by clinicians in terms of frequency (e.g. how often the situation is experienced) and intensity (e.g. how disturbing the situation is). Responses to items are given on 5-point Likert scale varying from 0 (never) to 4 (very frequently) for the frequency scale and from 0 (none) to 4 (great extent) for the intensity scale. For each item a composite score is computed by multiplying the frequency and the intensity score. The total MDS score is obtained by summing each item frequency x intensity scores. The resulting score based on 21 items ranges from 0 to 336. Two versions of the MDS-R were developed to fit with the adult and pediatric settings. Within each setting, three versions were made available for nurses, physicians and other healthcare professionals. The items content remained the same across the six versions, although the wording differed according to the context or professional discipline.

After receiving permission from the authors, the MDS-R (adult physician version) was translated as recommended by the WHO's procedures for cross-cultural validation and adaption of self-reported measures (WHO, 2000). The scale was translated into Italian by two bilingual psychologists who work in healthcare settings and was back translated by a bilingual psychologist who is also a medical doctor. During translation, minor changes were made to the wording of the items to make the same scale suitable for both physicians and nurses. The scale was then pilot-tested on 3 doctors and 2 nurses to resolve ambiguous expressions that could lead to item misunderstanding.

### *Beck Depression Inventory-2nd Edition (BDI-II)*

Depressive symptoms were assessed using the Italian validated version (Beck, Steer & Brown, 2006) of the *Beck Depression Inventory-2nd Edition (BDI-II)* (Beck et al., 1996). BDI-II is a self-report inventory designed to assess the presence and severity of depressive symptoms in the past 2 weeks in clinical and nonclinical samples. BDI-II is composed of 21 items describing physical and

cognitive/affective symptoms. Each item is rated on a 4-point Likert-type scale ranging from 0 to 3 based on severity of the symptoms. Total score is obtained by summing the scores of each item and range from 0 (no symptoms) to 63 (very severe symptoms). In the Italian version, a score of 12 has been identified as an optimal cut-off to discriminate individuals with and without problems of depression in the Italian population (Beck et al., 2006). Construct validity of the Italian BDI-II has been explored through exploratory and confirmatory factor analysis (Beck et al., 2006). The model is composed of a cognitive/affective and a somatic factor and presented good fit indexes ( $\chi^2 = 251.57$ ,  $df = 89$ ;  $CFI = .91$ ;  $RMSEA = .05$ ). Factors loadings ranged from .75 to .60 for the cognitive/affective factor and from .75 to .42 for the somatic factor. The Italian BDI-II showed good internal consistency (Cronbach's  $\alpha = .80$ ) and test-retest reliability ( $r = .93$ ) (Beck et al., 2006). As for convergent validity, the BDI-II score correlated significantly and positively with the Chicago Multiscale Depression Inventory (CMDI) total score ( $r = 0.79$ ;  $p < 0.001$ ) (Sacco et al., 2016).

## **Ethics**

The project was approved by the Institutional Review Boards of the participating Hospitals. Each participant signed an informed consent granting permission to use of the data for research purposes.

## **Statistical analysis**

Prior to data analysis, outliers and questionnaires with more than 2 items missing on each MDS-R scale (Frequency and Intensity) were removed from the database (Hamric et al., 2012). Content validity checking was performed by three researchers to assess if all the items could be retained in the Italian version of the scale. Skewness and kurtosis indices were computed to verify the normality of the distribution.

The structural validity of the MDS-R was evaluated by exploring its factorial structure. Exploratory Factor Analysis (EFA) is a statistical method used to uncover the underlying structure of a large set of variables. It is commonly used by researchers when developing a scale, and serves

to identify a set of factors underlying a battery of measured variables (Williams, Brown & Onsman, 2010). Given the non-normality of the distribution, EFA for ordinal data was conducted in Mplus, version 6, using the *Weighted Least Squares with Mean and Variance adjustment* (WLSMV) estimator with Promax rotation. The resulting models were compared using the following fit indices: *Root Mean Square Error of Approximation* (RMSEA), *Standardized Root Mean Square Residual* (SRMR), *Comparative Fit Index* (CFI) and *Tucker Lewis Index* (TLI). Values below .08 at the RMSEA and SRMR (Browne & Cudeck, 1993; Steiger, 1990), and values above .90 or higher at the CFI and TLI (Bentler, 1990) were judged as indicating an acceptable fit. Values below .06 at the RMSEA and SRMR, and values above .95 at the CFI and TLI were judged as indicating a good fit (Hu & Bentler, 1999). Items with factor loadings smaller than .35 or with poor conceptual clarity (e.g. items that saturated on more than two factors) were removed.

The resulting model was tested by Confirmatory Factor Analysis (CFA) using Mplus, version 6 (Muthèn & Muthèn, 2012). CFA is a form of factor analysis that is used to test how well the data fit the hypothesized measurement model (Kline, 2010). The goodness of fit of the model was evaluated by using the following indices: RMSEA, CFI, TLI and *Weighted Root Mean Square Residual* (WRMR). We considered values < 1 at WRMR as indicating a good fit (Yu, 2002).

Finally, scales' scores based on the extracted factors were computed using mean values. The reliability of the Italian MDS-R and its subscales were calculated with Cronbach  $\alpha$ .

After normalization of the Italian MDS-R scales, convergent validity was assessed by exploring the correlations between the Italian MDS-R scale scores and BDI-II scores using Pearson. Finally, to test for differences in moral distress according to age and years of experience, gender, profession and willingness to leave the position, ANOVA and T-tests were conducted with the scores of the Italian MDS-R serving as dependent variables.

## 4. Results

### Participants

Out of 262 eligible clinicians, questionnaires were collected from 191 clinicians, with a response rate of 73%. After list-wise exclusions based on the completion of the MDS-R, data on 184 participants remained available. Participants' socio-demographic characteristics are reported in Table 1. Participants were mostly nurses (55%) and physicians (37%), had an average age of 41.32 (SD=10.01) years and an average working experience of 11.9 (SD=8.3) years in ICU.

**Table 1. Socio-demographic characteristics of participants (N=184)**

Characteristic	Description	N (%)
Gender	Male	77 (44%)
	Female	97 (56%)
Age groups	0-35 yrs	57(31%)
	36-44 yrs	58(32%)
	45- above	69(37%)
Profession	Physician	64 (37%)
	Resident	14 (8%)
	Nurse	94 (55%)
Relational state	Single	40 (23%)
	Married/co-habiting	124 (72%)
	Separate/divorced/widow	8 (5%)
Hospital	1.	10 (5%)
	2.	28 (15%)
	3.	32 (17%)
	4.	14 (8%)
	5.	21 (11%)
	6.	12 (7%)
	7.	20 (11%)
	8.	47 (26%)
Professional experience groups	0-7 yrs	59(32%)
	8-15 yrs	62(34%)
	16-above	63(34%)
Working hours/week	Mean (SD)	41 (7)
	Range	10-60
Death of a patient in last 2 weeks	Yes	116 (67%)
	No	56 (33%)

## Descriptive analysis of the Italian MDS-R

Table 2 reports the 14 items of the validated Italian MDS-R (see next section) and its associated descriptive statistics. The complete Italian MDS-R is reported in Appendix 2. Most items presented high indexes (>1) of asymmetry and kurtosis and were accordingly treated as ordinal data.

**Table 2. Descriptive statistics of the Italian MDS-R items**

Item	Mean (SD)	Min- Max	Skew (SE)	Kurtosis (SE)
1. Witness healthcare providers giving “false hope” to the patient or family.	5.01 (4.58)	0-16	.76 (.18)	-.23 (.35)
2. Follow the family’s wishes to continue life support even though I believe it is not in the best interest of the patient.	4.69 (4.02)	0-16	1.00 (.17)	.42 (.35)
3. Initiate extensive life-saving actions when I think they only prolong death	6.58 (4.30)	0-16	.55 (.18)	-.38 (.35)
4. Follow the family’s request not to discuss death with a dying patient who asks about dying.	2.48 (3.43)	0-16	1.81 (.17)	3.45 (.35)
5. Feel pressure from others to order what I consider to be unnecessary tests and treatments.	3.67 (3.75)	0-16	1.17 (.18)	1.11 (.36)
6. Continue to participate in care for a hopelessly ill person who is being sustained on a ventilator, when no one will make a decision to withdraw support.	4.80 (4.06)	0-16	.81 (.17)	.16 (.35)
7. Avoid taking action when I learn that a physician or nurse colleague has made a medical error and does not report it.	2.08 (2.90)	0-16	1.86 (.17)	4.20 (.35)
8. Assist another physician or nurse who in my opinion is providing incompetent care.	4.55 (3.78)	0-16	.95 (.17)	.52 (.35)
9. Increase the dose of sedatives/opiates for an unconscious patient that I believe could hasten the patient’s death.	1.87 (2.36)	0-16	1.52 (.18)	2.34 (.35)
10. Take no action about an observed ethical issue because the involved staff member or someone in a position of authority requested that I do nothing	1.40 (2.42)	0-16	2.64 (.18)	9.46 (.35)
11. Follow the family’s wishes of the patient’s care when I do not agree with them, but do so because of fears of a lawsuit	3.44 (3.81)	0-16	1.29 (.18)	1.27 (.35)
12. Watch patient care suffer because of a lack of provider continuity.	4.29 (3.91)	0-16	.99 (.18)	.46 (.35)
13. Witness diminished patient care quality due to poor team communication	4.20 (3.77)	0-16	.83 (.17)	.03 (.35)
14. Ignore situations in which patients have not been given adequate information to insure informed consent	3.05 (3.57)	0-16	1.54 (.17)	2.54 (.35)



## **Factorial validity of the Italian MDS-R**

Based on content validity checking, 4 items (10, 11, 12, 21) of the original MDS-R were eliminated. Item 11 was removed because it was applicable only to teaching hospitals. Items 10, 12 and 21 were removed because they were judged as unrelated or confusing to answer.

An initial EFA was conducted to explore whether the MDS-R was a unidimensional or multidimensional scale. The best fit indices were obtained by a 4 factor model (RMSEA=.05; CFI=.97; TLI=.94; SRMR=.04). Based on the inspection of the factor structure, additional 3 items were removed (1, 13, 17) because they cross-loaded different factors or presented factor loadings smaller than .35. A follow-up factor analysis produced a 4 factor model (Table 3) with good fit indices (RMSEA=.01; CFI=.99; TLI=.99; SRMR=.03) and conceptual clarity.

These factors were interpreted to represent the following dimensions: 1) Futile care, 2) Ethical misconduct, 3) Deceptive communication, and 4) Poor teamwork. Overall, the factors extracted explained 59.21 % of total variance. Specifically, factor 1 (Futile care) accounted for 32.15% of the total variance, factor 2 (Ethical misconduct) accounted for 10.67%, factor 3 (Deceptive Communication) accounted for 8.44% and factor 4 (Poor Teamwork) accounted for 7.95% of the total variance.

The confirmatory factor analysis of the Italian MDS-R showed good fit indices (RMSEA=.06; CFI=.95; TLI=.94; WRMR=.65). The standardized factor loadings for the MDS-R were all statistically significant ( $p < .001$ ) and ranged from .39 to .78. Correlations between factors of the Italian MDS-R are reported in Table 4. All the correlations were significant for  $p < .001$ .

**Table 3. Exploratory factor analysis of the Italian MDS-R**

Italian MDS-R items	Factor loadings*			
	1	2	3	4
3. Initiate extensive life-saving actions when I think they only prolong death	<b>.82</b>	.40		
2. Follow the family's wishes to continue life support even though I believe it is not in the best interest of the patient	<b>.77</b>			
6. Continue to participate in care for a hopelessly ill person who is being sustained on a ventilator, when no one will make a decision to withdraw support.	<b>.55</b>	.52		
10. Take no action about an observed ethical issue because the involved staff member or someone in a position of authority requested that I do nothing		<b>.77</b>		.40
7. Avoid taking action when I learn that a physician or nurse colleague has made a medical error and does not report it.		<b>.50</b>	.35	
11. Follow the family's wishes of the patient's care when I do not agree with them, but do so because of fears of a lawsuit		<b>.55</b>		
5. Feel pressure from others to order what I consider to be unnecessary tests and treatments.		<b>.53</b>		
9. Increase the dose of sedatives/opiates for an unconscious patient that I believe could hasten the patient's death.		<b>.47</b>		
14. Ignore situations in which patients have not been given adequate information to insure informed consent		.42	<b>.70</b>	
1. Witness healthcare providers giving "false hope" to the patient or family.	.38		<b>.58</b>	
4. Follow the family's request not to discuss death with a dying patient who asks about dying			<b>.38</b>	
13. Witness diminished patient care quality due to poor team communication		.44		<b>.75</b>
8. Assist another physician or nurse who in my opinion is providing incompetent care.				<b>.59</b>
12. Watch patient care suffer because of a lack of provider continuity.		.41	.44	<b>.64</b>
<b>Cronbach's alpha</b>	<b>.73</b>	<b>.65</b>	<b>.55</b>	<b>.68</b>

\* Factor loadings less than .35 are omitted

Cronbach's  $\alpha$  of the Italian MDS-R was .81, and the Cronbach's  $\alpha$  of the subscales ranged from .55 to .73. Although the internal consistency of the Italian MDS-R was good, the value of Cronbach  $\alpha$  of some MDS-R subscales was low, probably because of the small number of items included in each subscale and the small sample size (Tavakol & Dennick, 2011).

**Table 4. Correlation coefficients between factors of the Italian MDS-R\***

	1	2	3	4
1 Futile care	-			
2 Ethical misconduct	.64	-		
3 Deceptive communication	.61	.64	-	
4 Poor teamwork	.47	.68	.52	-

\*All the correlations are significant for  $p < .001$ .

### Convergent validity of the Italian MDS-R

Convergent validity was assessed by correlating the Italian MDS-R scores and the BDI-II score. The Italian MDS-R score positively correlated with BDI-II score ( $r=.293$   $p=.000$ ). The correlations between Italian MDS-R subscales and BDI-II are reported in Table 5.

**Table 5. Correlation coefficients between MDS-R and BDI-II**

Variables	Mean	SD	1	2	3	4	5	6
1 MDS-R	3.48	1.76	-					
2 Futile care	5.23	3.28	.78**	-				
3 Ethical misconduct	2.22	1.54	.76**	.47**	-			
4 Deceptive communication	3.49	2.83	.69**	.44**	.36**	-		
5 Poor teamwork	4.25	2.85	.66**	.31**	.38**	.25**	-	
6 BDI-II	6.75	6.51	.29**	.20**	.15	.26**	.19*	-

\*correlations are significant for  $p < .05$

\*\* correlations are significant for  $p < .01$

Among the Italian MDS-R subscales, the highest correlation was found between Deceptive communication and BDI-II ( $r=.268$ ;  $p=.000$ ). No correlation was found between Ethical misconduct and BDI-II ( $r=.153$ ;  $p=.051$ ).

### Socio-demographic characteristics and moral distress

The total moral distress score differed neither across age groups ( $F=.217$ ;  $p=.805$ ) nor across professional experience groups ( $F=.910$ ;  $p=.404$ ); no significant differences were found in the moral distress score between men and women ( $t=-1.315$ ;  $p=.190$ ), or between physicians and nurses ( $t=-1.117$ ;  $p=.266$ ). Residents were excluded from this analysis because of their small number.

However, looking at the Italian MDS-R subscales, nurses reported higher scores on Futile care than physicians ( $t=2.051$ ;  $p=.042$ ), whereas physicians exhibited a higher score on Deceptive communication than nurses ( $t=3.617$ ;  $p=.000$ ). Finally, moral distress was significantly higher for those clinicians who considered leaving their position ( $t=2.778$ ;  $p=.006$ ).

## 5. Discussion

In the last 10 years, moral distress received increased interest in the field of critical care. Studies on moral distress and its impact on clinicians' well-being (Elpern et al., 2005; Sauerland et al., 2014; Dalmolin et al., 2014; Papathanassoglou et al., 2012) have used the MDS or its revised version (MDS-R). However, these scales have never been validated. Scale validation is an important step to produce reliable and theoretically-based data. The present study aimed to fill this gap by developing and validating the Italian version of MDS-R.

Our findings show that the Italian version of the MDS-R is a valid and reliable measure to assess moral distress among nurses, physicians and residents. Despite its brevity (14 items compared to 21 items of the MDS-R), the scale showed good internal consistency ( $\alpha=.81$ ), which is slightly lower than the MDS-R (.88) (Hamric et al., 2012).

Factor analysis highlighted the existence of four factors contributing to moral distress, namely, Futile care, Deceptive communication, Ethical misconduct and Poor teamwork. This four-factor model showed a good fit with the data and explained 59% of the total variance, which is considerably higher than the variance explained by the three-factor model of the original MDS (19%) (Corely et al., 2001). This finding may offer empirical evidence that supports a theoretical refinement of the concept. So far, moral distress has been conceived as a mono-dimensional construct. Only recently, some scholars have begun to suggest that moral distress could be better conceptualized as a concept made up of several dimensions (McCarty & Gastmans, 2015). Our findings provide empirical evidence that support the multidimensionality of moral distress, meaning that there are different correlated factors contributing to it (Soleimani et al., 2016).

The identified factors have been previously mentioned as major sources of moral distress. Futile care encompasses those situations where clinicians perceive that the care provided is inappropriate, either because of no medical benefit or because it is harmful to patients. The provision of futile care or overly aggressive treatment has been identified as a major factor causing moral distress in previous studies (Brazil, Kassalainen & Ploeg, 2010; Rice, Rady, Hamrick,

Verheijde & Pendergast, 2008). Ethical misconduct refers to ethically questionable behaviors that may occur in everyday clinical practice, such as ordering unnecessary treatment, or not speaking up when an error occurs. This factor may be considered by some theorists as the core of moral distress, since it more explicitly refers to an ethical realm (Corely, 2002, Varcoe, Pauly & Webster, 2012; Hanna, 2004). Deceptive or misleading communication, such as giving “false hopes” or not discussing death with a dying patient, may not be a rare occurrence in clinical practice especially in the field of critical care and oncology where truth-telling may be perceived as difficult and painful for both clinicians and patients (Surbone, 2008; Vince & Petros, 2006). Although in the Italian healthcare system the habit of concealing hurtful information is frequent, a deceptive communication with patients and families emerged as component of moral distress similarly to other studies (Corely et al., 2001). Finally, a poorly functional team, where there is inadequate communication and a lack of trust in colleagues’ competence, has been identified as a factor generating moral distress because of the negative impact it may have on patient care (Burston and Tuckett (2012). Poor teamwork may yield to conflicting advice to patients, discontinuity of care and poor quality of care.

The four-factor model of moral distress seems to reflect the complexity of clinical ICU work, that involves not only a biomedical dimension, but also a relational and an ethical one (Engel, 1997). Indeed, caring for critically ill patients involves the clinicians’ biomedical knowledge regarding the treatment of the disease, their relational competencies in communicating with patients and in working as a team, and their professional values.

From a practical perspective, the multidimensionality of the Italian MDS-R will allow a more accurate assessment of moral distress and the implementation of tailored interventions addressing the components of moral distress that will be found out to be more critical for a specific ICU or for a specific professional category. For example, in our study no differences were detected in the overall moral distress score between nurses and physicians. However, when looking at the different factors, nurses scored higher than physicians on Futile care and physicians scored higher

than nurses on Deceptive communication. It is possible that nurses' professional role and their proximity to patients could make them more sensitive to situations of futile care and therefore account for this difference (Peter & Liaschenko (2004). Similarly, physicians who are usually responsible to update family members and communicate bad news could report more distress if they see that this important task is not attended or not performed properly.

As in the development of other psychological measures, it is possible that the factor structure that emerged in this study is influenced by the normative and social culture of our sample. Future research conducted in other countries could verify the validity of this model (Soleimani et al., 2016). The validation of the Italian MDS-R into different cultural settings will enhance the generalizability of the scale and allow a cross-cultural comparison of findings.

Our study was the first to assess the relationship between moral distress and depression. We found a significant correlation between the Italian MDS-R and BDI-II, suggesting that moral distress may be associated with depressive symptoms. Consistently with other studies, we also found that moral distress was higher in clinicians contemplating the possibility of leaving their posts (Hamric et al., 2012). Previous studies found a correlation between moral distress, burnout and job satisfaction (Dalmolin et al., 2014; Ando, 2016) suggesting that moral distress is a phenomenon that could seriously impact on clinicians' well-being and on job retention and should therefore be addressed. Based on this study results, different interventions might be implemented to decrease the different components of moral distress. Communication skills trainings could be offered to promote a honest communication with patients, and staff debriefing sessions could be offered to facilitate teamwork and reflect on the ethical aspects of patient care. Ethical rounds could also serve to promote professionalism and foster a positive ethical climate.

There are several limitations to this study. The participants were drawn from a convenience sample of hospitals belonging to a single region in the north of Italy, hence the generalizability of our findings is limited. Given the small number of participants, the exploratory and confirmatory factor analysis were conducted on the same sample of participants and this could have influenced

the validation results. For this reason further studies on larger samples are needed to confirm the factorial structure (William, Brown & Osnam, 2012). Finally, the Italian MDS-R scale was validated on a sample of ICU professionals. This implies that the generalizability of the scale to clinicians working in other settings should be confirmed.

This study provides a first validated instrument to screen for moral distress that is short and presents good psychometric properties. This scale may allow a more accurate assessment of moral distress and the implementation of tailored interventions addressing its different components. Our results highlighted the negative impact of moral distress on depression and on intention to leave one's job. Future research could explore protective factors able to buffer the negative impact of moral distress, such as coping styles, workload, job control, and social integration.

## **CHAPTER 4. Study 2. Value congruence and depressive symptoms in critical care clinicians: the mediating effect of moral distress**

### **1. Abstract**

**Introduction.** Clinicians working in Intensive Care Units (ICUs) are often exposed to several job stressors that can negatively affect their mental health. Literature has acknowledged the role of value congruence and job control in determining clinicians' psychological wellbeing and depressive symptoms. However, potential mediators of this association have been scarcely examined. This study aimed to test the mediating role of moral distress in the relationship between value congruence and job control, on the one hand, and depression on the other hand. **Method.** A cross-sectional study involving physicians, nurses and residents working in 7 ICUs in the north of Italy was conducted. Clinicians were administered the Italian *Moral Distress Scale-Revised* (MDS-R), the *Value* and *Control* subscales of the *Areas of Worklife Scale* (AWS), and the *Beck Depression Inventory-II* (BDI-II). Structural equation modeling was used to test the mediation model. **Results.** Analysis on 170 questionnaires (response rate 72%) found no direct relationship between value congruence and job control, and depression. A total indirect effect of value congruence on depression through moral distress ( $\beta = -.12; p = .02$ ) was found. **Conclusions.** Moral distress is an important factor in the development of depressive symptoms among critical care clinicians who perceive a value incongruence with their organization and consequently, need to be addressed to improve healthcare professionals well-being.

**Keywords:** Value congruence, Moral distress, Depression, Occupational stress, Critical Care.



## **2. Introduction**

Clinicians are frequently exposed to a number of job stressors that can negatively affect their mental and physical health, decrease their work engagement and the quality of care provided (Weinberg, & Creed, 2000). Several studies have shown that clinicians working in critical care settings, such as intensive care units, have a high risk of developing emotional distress such as burnout, anxiety and depression (Embriaco et al., 2012; Embriaco, Papazian, Kentish-Barnes, Pochard, & Azoulay, 2007; Embriaco, Azoulay, Barrau, Kentish, Pochard, Loundou, & Papazian, 2007). Working in an Intensive Care Unit (ICU) can be especially stressful because of the high patient morbidity and mortality, challenging work routines, and frequent encounters with traumatic and ethical issues (Donchin & Seagull, 2002).

Recently, a large body of research showed that critical care clinicians are also frequently exposed to the experience of moral distress (Elpern, Covert, & Kleinpell, 2005; Hamric & Balckhall, 2007; Cavaliere, Daly, Dowling, & Montgomery, 2010, Lamiani, Borghi, Argentero, 2015). Moral distress has been defined as the painful experience of not acting according to what one perceives to be ethically right (Jameton, 1984). Literature has identified psychological and organizational factors as being a possible cause. For example, lack of assertiveness, lack of power in the healthcare hierarchy, peer pressure, and lack of resources or time (Hamric, Borchers & Epstein, 2012).

To date, qualitative studies have shown that moral distress negatively affects clinicians' wellbeing and job retention, leading to sadness, powerlessness, guilt, anger and withdrawal from patient care (Wilkinson, 1988; Elpern, Covert, & Kleinpell, 2005; Ferrel, 2006). However, although the role of organizational factors in determining moral distress is acknowledged, little is known about which organizational factors may influence moral distress.

Some studies have explored the role of ethical climates in influencing clinicians' moral distress (Corley, Minick, Elswick, & Jacobs, 2005; Pauly, Varcoe, Storch, & Newton, 2009; Hamric & Blackhall, 2007). Ethical climate refers to the moral atmosphere of the work environment (Olson,

1998). A positive ethical climate in healthcare organizations has been defined as the one in which conditions of power, trust, inclusion, role flexibility, and inquiry are present (Olson, 1998). These studies found that, among nurses, moral distress was associated with poor ethical climate and a lack of ethical debate among colleagues (Corley et al., 2005; Hamric & Blackhall, 2007; Piers et al., 2012).

Over the last five years there has been an increased interest in the role of values in determining employees' wellbeing at work. Specifically, the relationship between the employees' values and the values of their organization has been studied by several authors (Hoffman, Bynum, Piccolo, & Sutton, 2011; Edwards & Cable, 2009; Hoffman & Woehr, 2006; Kristof-Brown, Zimmerman, & Johnson, 2005). Clinicians bring values to work that have been developed through personal experience and professional training. These values are often confronted with values inherent in the HR policies and procedures of clinics, hospitals, and health care systems and may or may not be congruent. For example, a clinician may believe in beneficentiality and professionalism, but these values may conflict with the value of efficiency and cost-containment held by the organization. Research suggests that the congruence between the employee's values and the organization values is an important factor in determining organizational outcomes, such as job satisfaction, turnover intentions (Edwards & Cable, 2009; Ostroff & Judge, 2007), and employees' wellbeing (Leiter, Frank, & Matheson, 2009; Fiabane, Giorgi, Sguazzin, & Argentero, 2013). Leiter, Frank and Matheson (2009) found that values incongruence contributed to predicting all burnout dimensions among physicians. Likewise, increased levels of value congruence were found to reduce psychological distress, including anxiety and depression, and secondary traumatic stress symptoms among social workers (Graham, Shier & Nicholas, 2016). In the Italian context, Fiabane, Giorgi, Musian, Sguazzin, and Argentero (2012) found that conflict between personal and professional values was one of the main causes of job stress among healthcare staff in rehabilitation units. Value congruence was also identified as one of the main predictors of professional efficacy among nurses (Fiabane et al., 2013).

Other scholars (Hamric & Blackhall, 2007), who discovered that physicians reported significantly less moral distress than nurses, hypothesized that holding a power position in medical hierarchy may influence the experience of moral distress. According to Hamric & Blackhall (2007), it is possible that the more powerful position of physicians in comparison to nurses could explain these differences. It is also possible that the greater job control and influence that physicians have on the treatment decisions and patient care may help them to pursue the course of action that is more consistent with their values. Consistently with these hypothesis, some studies found that lack of job control has been associated with increased psychological distress, including somatization, depression and anxiety, among healthcare professionals (Smith, Frank, Mustard & Bondy, 2008; Fiabane et al., 2012) and social service workers (Graham, Shier & Nicholas, 2016). Job control was found to correlate with depressive symptoms also among non-healthcare professional workers (Pulkki-Råback et al., 2016)

Despite numerous studies suggesting a positive relationship between value congruence and clinicians' psychological wellbeing (Leiter, et al., 2009; Fiabane et al., 2013), so far no study has explored if value congruence may also lead to moral distress. In a similar vein, no studies are available that empirically assess the role of job control in preventing moral distress. In order to promote healthcare professionals' psychological well-being at the workplace, research is needed to identify the factors that can influence clinicians' moral distress as well as to assess the impact of moral distress on clinicians' wellbeing in terms of depressive symptoms. The present study aims to fill this gap by exploring the relationship between value congruence, control, moral distress and depression, through the testing of a mediation model. The association between work-related psychosocial stress factors and depression has been proved by several works (Bonde, 2008; Netterstrom et al., 2008), but potential mediators of this association have been scarcely examined (Pulkki-Råback et al., 2016). This article tests the mediating role of moral distress in the relationship between value congruence and job control, on the one hand, and depression on the other hand.

Based on previous literature on moral distress and work-related psychosocial stress factors, we hypothesized that value congruence and job control would decrease clinicians' depressive symptoms. As qualitative literature highlighted the negative impact that moral distress has on clinicians' wellbeing in terms of sadness, powerlessness, and even physical symptoms (Austin et al., 2005; Gutierrez, 2005; Elpern et al., 2005; Ferrel, 2006; Zuzelo, 2007), we also hypothesized that moral distress could yield to depression, even when controlling for emotional difficulties that clinicians may be having due to non-work factors. Therefore we hypothesized that moral distress could mediate the relationship between value congruence and control, on the one hand, and depression, on the other hand. Specifically, we set the following hypotheses:

Hypothesis 1: Clinicians' perception of value congruence (H1a) and job control (H1b) are negatively related to depression.

Hypothesis 2: Moral distress mediates the relationship between clinicians' value congruence and depression.

Hypothesis 3: Moral distress mediates the relationship between clinicians' job control and depression.

### **3. Methods**

#### **Participants and procedure**

We conducted a cross-sectional survey in 7 adult medical-surgical Intensive Care Units (ICU) in the North of Italy. Prior to data collection, a meeting was conducted with each ICU's team to explain the aim of the study.

Physicians, residents, and nurses were requested to fill in a series of questionnaires exploring value congruence, control, moral distress, and depression. Socio-demographic information was also collected regarding gender, profession, years of experience, marital state, working hours per week and presence of emotional difficulty external to the work environment. The questionnaires were anonymous and were completed during working hours within a two-week period. Participation was on a voluntary basis. Participants were ensured that the data would be treated as confidential.

## **Ethics**

The project was approved by each Ethical Committee of the 7 hospitals involved. Along with the questionnaires, participants signed an informed consent, granting permission to use of the data for research purposes.

## **Measures**

### *Value congruence and Control*

Two subscales of the *Areas of Worklife Survey* (AWS) (Maslach & Leiter, 1997; Leiter & Maslach, 2005), namely Values and Control, were used to assess value congruence and control over one's job. The AWS is part of the Organizational Check-up System (OCS) and is composed of 29 items belonging to 6 different subscales which measures organizational factors that may cause burn out. The AWS has been validated in an Italian sample of healthcare professionals by Borgogni, Galati & Petitta (2005) and was shown to possess good psychometric characteristics. Construct validity of the AWS was assessed through factor analysis. Factorial analysis confirmed a six-factor structure of the AWS corresponding to Workload, Control, Reward, Community, Fairness and Values (Leiter & Maslach, 2004). The six-factor solution was found to be an excellent fit to the data ( $\chi^2= 5138.98$ ,  $df=358$ ; CFI=.94; RMSEA=.04), with factor loadings ranging from .78 to -.44 for the Value factor,

and from .73 to .58 for the Control factor. Cronbach's  $\alpha$  of the two subscales was =.73 for Values and .70 for Control (Leiter & Maslach, 2004).

In this study, we used 2 subscales of the AWS, namely Values and Control. Values (4 items; Cronbach's  $\alpha$  = .75) refer to the degree of correspondence between employees' professional values and the organization's principles and practices. Control (3 items; Cronbach's  $\alpha$  =.68) refers to the possibility of taking decisions, solving problems and contributing to the fulfillment of responsibilities. Items are scored on a 5-point Likert scale ranging from 1 ('strongly disagree') to 5 ('strongly agree'). Scales scores are calculated as averages across scale items. All observed variables had a significant contribution to the latent constructs with standardized factor loadings ranging from .77 to .49 for Value, and from .67 to .64 for Control.

### *Moral distress*

The Italian version of the *Moral Distress Scale-Revised* (MDS-R) was used to measure moral distress (Appendix 2). The Italian MDS-R was validated on a sample of 184 physicians and nurses and presented good reliability and psychometric properties (Lamiani, Setti, Barlascini, Vegni, & Argentero, 2016). The Italian MDS-R is composed of 14 items describing morally distressing situations. Each item is scored by clinicians in terms of frequency (e.g. how often the situation is experienced) and intensity (e.g. how disturbing the situation is). Responses are given on a 5-point Likert scale varying from 0 (=never) to 4 (=very frequently) for the frequency scale, and from 0 (=none) to 4 (=great extent) for the intensity scale, with higher scores indicating a greater degree of moral distress. For each item a composite score is computed by multiplying the frequency and the intensity score. The total MDS-R score ranges from 0 to 16 and is obtained by summing the frequency x intensity scores and dividing the total by the number of items. The MDS-R is composed of four subscales: Futile Care, Ethical Misconduct, Poor Teamwork, and Deceptive Communication. All observed variables had a significant contribution to each subscale with standardized factor loadings ranging from .83 to .30. All the subscales had good internal validity

and contributed significantly to the second-order latent construct with standardized factor loadings ranging from .93 to .62. Cronbach's  $\alpha$  value for the MDS-R was .79.

### *Depression*

Depressive symptoms were assessed using the Italian adaptation (Beck, Steer & Brown, 2006) of the *Beck Depression Inventory-2nd Edition* (BDI-II) (Beck et al., 1996). BDI-II is a self-report inventory designed to assess the presence and severity of depressive symptoms in the past 2 weeks in clinical and nonclinical samples. It is composed of 21 items describing physical and cognitive/affective symptoms. Each item is rated on a 4-point Likert-type scale ranging from 0 to 3 based on severity of the symptoms. Total score is obtained by summing the scores of each item and ranges from 0 (no symptoms) to 63 (very severe symptoms). Cronbach's  $\alpha$  value for the BDI-II was .89. All observed variables had a significant contribution to the latent construct with standardized factor loading ranging from .67 to .22.

### *Control variable*

Given that depression could be influenced by stressful life events and emotional difficulties external to the work environment (Risch et al., 2009), this variable was controlled when testing the mediation model in order to reduce confounding effects. In the analyses, the presence emotional difficulty was included as dummy variables (No=0/Yes=1).

### **Statistical analysis**

First, we tested the divergent validity of value, job control, moral distress' and depression using Confirmatory Factor Analysis (CFA). Secondly, preliminary analyses were conducted in order to test the causality of the hypothesized model. Correlations were conducted using Pearson  $r$  to assess the relationships among study variables (values, control, moral distress and depression). Structural

equation modeling (SEM) (Bentler, 2006) was then used to test the hypothesis of our research model.

The goodness of fit was evaluated based on the  $\chi^2$  goodness-of-fit statistic and some alternative fit indices. Specifically, Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA) and Standardized Root Mean Square Residual (SRMR) were used. As chi-square often results significant due to its sensitivity to the type of variables distribution and sample size (Barret, 2007), it has been suggested, with some consensus in the psychometric literature, that a model demonstrates reasonable fit if the ratio between the chi-square and the degrees of freedom does not exceed 3 ( $\chi^2/df \leq 3$ ) (Kline, 2010; Iacobucci, 2010). As for the other indexes, values below .08 at the RMSEA and SRMR (Browne & Cudeck, 1993; Steiger, 1990), and values above .90 at the CFI and TLI (Bentler, 1990) were judged as indicating an acceptable fit. Values below .06 at the RMSEA and SRMR, and values above .95 at the CFI and TLI were judged as indicating a good fit (Hu & Bentler, 1999). All analyses were performed using the Mplus software, version 6 (Muthén & Muthén, 2012).

## **4. Results**

### **Participants**

Out of 252 eligible clinicians, questionnaires were collected from 181 clinicians, with a response rate of 72%. After data cleaning based on the completion of all the questionnaires, data on 170 clinicians remained available for analysis. Of these, 62 (37%) were physicians, 92 (55%) were nurses and 14 (8%) residents. Most of the participants (57%) were female. Clinicians had a mean age of 41.41 (SD=10,11) and their average working experience amounted to 11.84 years (SD=8,37). Clinicians worked 40.93 hours per week on average (SD=6.47). Most participants (72%) were married or co-habiting, 23% were single and 5% were divorced or widowed. In addition, 26% were currently going through an emotionally difficult time due to causes external to work.



## Preliminary analyses

Correlation matrix between study variables is reported in Table 1. Highly significant correlations were found between value congruence and depression ( $r = -.22, p < .01$ ), and between job control and depression ( $r = -.26, p < .01$ ). Moral distress was found to be strongly associated with value congruence ( $r = -.43, p < .001$ ) and depression ( $r = .37, p < .001$ ), whereas no significant relationship was found between control and moral distress.

Based on the results of the correlation matrix, further investigation of these variables using SEM analyses was justified (Baron & Kenny, 1986).

**Table 1. Correlations between value congruence, control, moral distress, depression and presence of emotional difficulties**

Variable	Range	Mean (SD)	Pearson correlation coefficient (r)				
			1	2	3	4	5
1. Value congruence	1-5	3.43 (0.63)	-	.27**	-.43***	-.22**	-.11
2. Control	1-5	3.55 (0.67)		-	-.17	-.26**	-.06
3. Moral distress	0-16	3.41 (1.75)			-	.37***	.16
4. Depression	0-63	6.53 (6.27)				-	.43***
5. Emotional difficulty+	0-1	0.26 (0.43)					-

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

+ Emotional difficulty was coded as dichotomous variable (No=0/Yes=1)

## Test of the mediation model

Direct and indirect effects are reported in Table 2. The path from value congruence to moral distress was significantly negative ( $\beta = -.414; p < .001$ ) and the path from moral distress to depression was significantly positive ( $\beta = .296; p = .003$ ). The direct effect of value congruence on depression was not significant ( $\beta = -.007; p = .944$ ), thus invalidating Hypothesis 1a. The direct effect of control on depression was also not significant ( $\beta = -.176; p = .058$ ) thus invalidating Hypothesis 1b.

The mediation model of value congruence and control on depression through moral distress showed an overall acceptable fit with the data:  $\chi^2 = 1311.576, df = 850, p < .001, \chi^2/df = 1.5; CFI = .76; TLI = .75; RMSEA = .05; SRMR = .07$ . Figure 1 reports the parameters estimates of the mediation model relationships ( $\beta$  coefficients and the levels of significance). The fact that there was a

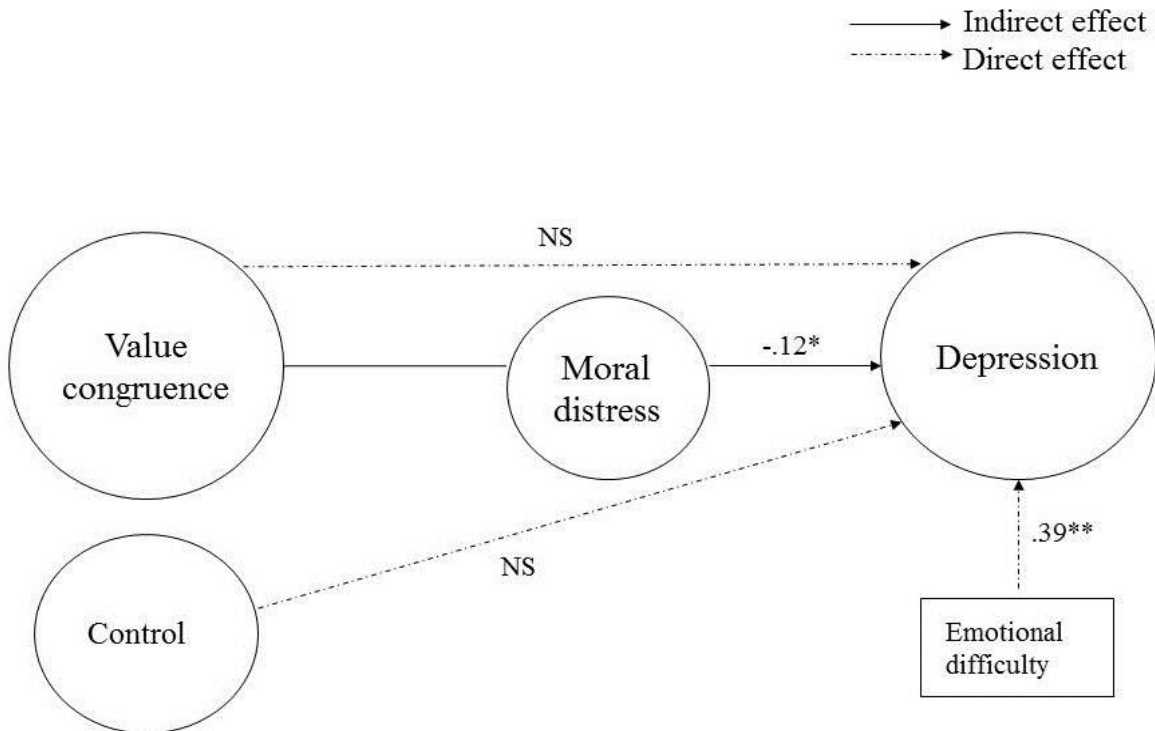
significant total indirect effect of value congruence on depression through moral distress ( $\beta = -.123$ ;  $p=.021$ ) supports Hypothesis 2 and provides evidence for full mediation of moral distress on depression. Moral distress did not mediate the relationship between control and depression ( $\beta = -.022$ ;  $p=.515$ ) thus invalidating Hypothesis 3.

**Table 2. Direct and indirect effects on depression**

Variables	Depression $\beta$ (SE)
<i>Direct effects</i>	
Value congruence	-.01 (.10)
Control	-.17 (.09)
Moral distress	.29 (.10)*
Emotional difficulty	.39 (.06)**
<i>Indirect effects</i>	
Value congruence THROUGH moral distress	-.12 (.05)*
Control THROUGH moral distress	-.02 (.03)

\* $p<0.05$ ; \*\* $p<0.01$ ; \*\*\* $p\leq 0.001$

**Figure 1. Parameters estimates of the mediation model (standard coefficients)**



\* $p<0.05$ ; \*\* $p<0.01$ ; \*\*\* $p\leq 0.001$

## **5. Discussion**

The aim of this study was to test if moral distress may mediate the relationship between value congruence and control, on the one hand, and depression on the other hand, in a sample of critical care clinicians. Results from the current study provided empirical evidence of the mediating role of moral distress in the relationship between value congruence and depression. Thus, clinicians' perception of congruence between their values and the values of their unit influences their experience of moral distress, which in turn may cause depressive symptoms.

Several studies found that value congruence is an important factor in protecting healthcare professionals from burnout and job resignation (Edwards & Cable, 2009; Ostroff & Judge, 2007; Leiter et al., 2009; Fiabane et al., 2013). Our findings showed that value congruence is also an important factor in protecting clinicians from moral distress. This is consistent with other studies on ethical climates which found that a poor ethical climate is correlated with moral distress. Taken all together, these results suggest that moral distress may grow in an organizational terrain where there is a lack of attention or investment regarding the value dimension as well as the fit between the clinician's values and the organization's values. On the contrary, literature highlights that value congruence may be a powerful source of involvement, professional efficacy, and wellbeing for clinicians (Fiabane et al., 2013). Moreover, value congruence may be particularly important for healthcare professionals, compared to other sectors, considering that their vocational choice is often driven by strong values of altruism, solidarity and compassion.

In our study, we did not find a mediation effect of moral distress in the relationship between job control and depression as we hypothesized. It is possible that the dimension of control measured by the AWS, which includes the possibility of taking individual decision and exercise professional autonomy, does not influence moral distress and therefore depression, because it does not capture a group dimension in which most ethical decisions are made. As moral distress encompasses situations in which clinicians act against their moral standards due to the relational and organizational contexts they work in (Varcoe, Pauly, & Webster, 2012), it is possible that their

ability to negotiate, influence other colleagues or be assertive in a group may play a more relevant role, rather than job control, in influencing clinicians' moral distress and depression. Clinicians' level of power or assertiveness are therefore other important variables that should need further investigation.

Interestingly, in this study we did not find a direct effect of value congruence on depression. In other words, the incongruence with organizational values in itself seems not to be enough to cause depressive symptoms among clinicians. However, we found an indirect effect of value congruence on depression through moral distress. This may suggest that it is not the abstract, theoretical discordance with the values of the organization that causes depression, but rather the practical and lived experience of the erosion of ethical integrity in the everyday work with patients (Truog et al., 2015). In other words, moral distress may be conceived as the embedded and lived experience of value discordance in the healthcare system.

We found that the experience of moral distress may cause depression among clinicians, even when controlling for the presence of emotional difficulties. This finding is consistent with previous qualitative studies investigating the experience of moral distress among clinicians (Wilkinson, 1988; Elpern, et al., 2005; Ferrel, 2006). These studies reported that clinicians often experienced sadness, anger, powerlessness and withdrawal from patient care, all symptoms that are consistent with a depressive state. Our study is the first to provide empirical evidence that moral distress, if not addressed, could lead to depressive symptoms among clinicians. Actions to prevent or limit moral distress should be undertaken by healthcare organizations in order to promote the psychological wellbeing of clinicians.

The current study has several limitations. First, our sample consisted of ICU clinicians working in a single region of the north of Italy. Generalizability of our findings might thus be limited. Second, the sample size was relatively small for SEM analysis and this may have influenced the fit indexes of the model, as well as the possibility of controlling for other variables that may be relevant for the study, such as the number of working hours per week or the death of a

patient during the study time. Third, although our mediation model provided new insights into the relationship between value congruence, job control, moral distress and depression, the data we collected were cross-sectional. Therefore, our conclusions have to be interpreted with care especially for what concerns the direction of causality. Finally, as all variables in our study were measured using self-reported questionnaires, a common-method bias may exist (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Future studies could test this model with a larger sample of clinicians and could explore the role of individual variables in preventing moral distress, such as personality traits or coping strategies.

Taken together, the findings of the current study have important practical implications for healthcare organizations and for clinicians working in intensive care units. As moral distress may threaten clinicians' wellbeing leading to depression, organizations should implement interventions to prevent this problem. Cultivating a positive ethical culture and fostering value congruence should be considered as priority actions to prevent moral distress and depression among critical care clinicians. As literature is consistent in reporting the importance of value congruence for the organizational wellbeing (Bisset, 2014; Leiter & Maslach, 2004), it should be considered by healthcare organizations as one of the intangible goods to invest in.

## CHAPTER 5. Study 3. Moral distress and family satisfaction with the quality of care: a preliminary study

### 1. Abstract

**Introduction.** The emotional well-being of clinicians is important to provide high quality care. However, little is known about the relationship between clinicians' moral distress and the quality of care provided. This study assessed the relationship between clinicians' moral distress and satisfaction with care in critical care settings. As critical care patients are often unconscious, family satisfaction was used as an indicator. **Method.** Physicians and nurses working in 5 Intensive Care Units (ICU) and the family members of their patients were surveyed. Clinicians were administered the Italian *Moral Distress Scale-Revised* (MDS-R). Family members of the patients admitted at the time of clinicians' survey completed the *Family Satisfaction in the ICU* (FS-ICU) questionnaire. Correlations between MDS-R scores and FS-ICU scores were calculated with Spearman coefficient. **Results.** Questionnaires from 123 clinicians' and 59 family members were analyzed. Clinicians' moral distress correlated with family satisfaction as to the inclusion in the decision making process ( $\rho=-.900$ ;  $p=.037$ ). Physicians' moral distress correlated with satisfaction regarding the courtesy and respect toward patient ( $\rho=-.900$ ;  $p=.037$ ). Nurses' moral distress correlated with satisfaction regarding breathlessness and agitation management ( $\rho=-.900$ ;  $p=.037$ ), provision of emotional support ( $\rho=-.900$ ;  $p=.037$ ), understanding of information ( $\rho=-.900$ ;  $p=.037$ ), and inclusion in the decision making process ( $\rho=-1.00$ ;  $p=.000$ ). **Conclusions.** Moral distress of physicians and nurses is negatively associated with several aspects of family satisfaction. Findings suggest that when care is not provided according to ethical standards, clinicians suffer and family members are less satisfied.

**Keywords:** Moral distress, Occupational health, Patient satisfaction, Quality of health care

## **2. Introduction**

Patient satisfaction is an important and commonly used indicator for measuring quality in health care and is now integral part of the hospitals' processes for monitoring and improving health care (Committee on Quality of Health Care in America, 2001; Hendriks, Vrieling, Smets, van Es, & De Haes, 2001). Patient satisfaction plays an important role as it affects clinical outcomes, patient retention in care, and medical malpractice claims (Kane, Maciejewski & Finch, 1997; Levinson et al., 1997). Literature shows that patient satisfaction with care is often based on "soft" aspects of care, such as kindness, respect, effective communication and good relationships with the healthcare staff (Argentero, Dell'Olivo, & Ferretti, 2007; Williams, Weinman, & Dale, 1998). The relational competencies and the emotional well-being of healthcare professionals seem to be of pivotal importance in order to provide a good quality care. Consistently, findings of emerging research show that physicians' stress, fatigue, depression, or general psychological distress negatively affects healthcare systems and patient care (Wallace, Lemaire, & Ghali, 2009).

Several constructs have been defined to measure the well-being of healthcare professionals such as those of burnout (Leiter & Maslach, 1982), secondary traumatic stress (Bride, Robinson, Yegidis, & Figley, 2004) and, most recently, moral distress (Jameton, 1984). Moral distress is the painful feeling that occurs when professionals cannot carry out what they believe to be ethically appropriate actions because of personal or institutional constraints. The hallmark of moral distress is therefore a perceived violation of one's own professional integrity and obligations (Epstein & Hamric, 2009).

Several studies analyzed the relationship between clinicians' burnout and patient satisfaction (Anagnostopoulos et al., 2012; Argentero et al., 2007; Garman, Morris, & Corrigan, 2002; Leiter, Harvie, & Frizzell, 1998). Burnout was found to negatively impact patient satisfaction with care in different settings. Garman et al. (2002) surveyed 333 staff and 405 clients from 31 behavioral health programs in the United States and found that staff burnout was negatively correlated with patient satisfaction. Argentero et al. (2007) also found that staff burnout was negatively correlated with

patient satisfaction in a sample of 10 dialysis centers in Italy. Consistently, Anagostopulous et al. (2012) found that patients of physicians with high-exhaustion and high-depersonalization had significantly lower satisfaction scores, compared with patients of physicians with low-exhaustion and low-depersonalization, respectively.

However, for what concerns moral distress no data are currently available regarding its impact on the perceived quality of care. The analysis of clinicians' moral distress and patient satisfaction is of particular interest in emotionally and ethically challenging clinical environments, such as intensive care units, where clinicians often face difficult ethical decisions (Abizanda, Almendros Corral, & Balerdi Perez, 1994) and patients and their families pass through a delicate and stressful time (Azoulay, Pochard, Kentish-Barnes, & et al., 2005). Since most ICU patients cannot make decisions for themselves (Nelson et al., 2001), families are often involved as surrogate decision makers and their perspective is especially important.

The aim of this study was to analyze the relationship between moral distress of clinicians (physicians and nurses) and satisfaction with care provided in the ICU. As patients admitted to ICUs are often not able to evaluate the quality of care received due to their critical conditions, family members' satisfaction was used as indicator.

### **3. Methods**

#### **Research design**

A cross-sectional observational study was conducted in collaboration with 5 medical-surgical ICUs in the north of Italy. A survey was administered to physicians and nurses over a 2-week period, and to family members of patients admitted to the ICUs at the time of clinicians' survey.



## **Procedure**

A meeting with each ICU team was conducted to present the study. At the end of the meeting, questionnaires were left to clinicians that assessed sociodemographic characteristics, and moral distress. The questionnaires were self-administered and were completed over a 2-week period on a voluntary basis. Attention was paid to secure confidentiality of the questionnaires by assigning random identification numbers.

Clinical data of the patients admitted during the staff survey were reviewed to assess their eligibility in the study. Patients were eligible if they had no legal action pending, they stayed in the ICU for a minimum of 24 hours and had a family member speaking Italian and taking care of them. For the eligible patients, contact information of family members were collected. One month after their recovery, family members were called by a researcher with a background in psychology to present the study and assess their willingness to participate. Accepting family members were mailed an anonymous questionnaire to assess the quality of care received in the ICU. The questionnaire was mailed to one family member per patient along with the informed consent. The questionnaire was accompanied with a pre-stamped envelope for return. Three weeks after the questionnaires were sent, a follow-up call was conducted to assess if there were problems with the questionnaire completion.

Data from staff and family members were collected between January 2015 and December 2015. The study was approved by the Ethical Review Boards of the 5 participating hospitals. Clinicians and family members provided written informed consent to use the data for research purposes.

## **Measures**

### *Sociodemographic and clinical data*

At the beginning of the survey, clinicians were asked to provide information on age, gender, marital status, years of experience in the ICU, hours worked per week and death of a patient in the last 2

weeks. Family members were asked to indicate their age, gender, level of education, relationship with the patient, previous experience with ICU care, place of residence and if currently living with the patient. Data from patients were collected from inspection of clinical charts and included: age, gender, SAPS-II score, ranging from 0 to 163, which indicates the severity of clinical condition, reasons for admission to ICU, length of ICU stay and mortality rate.

### *Moral Distress*

To measure moral distress, the Italian version of the *Moral Distress Scale-Revised* (MDS-R) was used (Appendix 2). The Italian MDS-R was validated on a sample of 184 physicians and nurses and presented good reliability and psychometric properties (Lamiani, Setti, Barlascini, Vegni, & Argentero, in press). The Italian MDS-R is composed of 14 items describing morally distressing situations. Each item is scored by clinicians in terms of frequency (e.g. how often the situation is experienced) and intensity (e.g. how disturbing the situation is). Responses are given on a 5-point Likert scale varying from 0 (=never) to 4 (=very frequently) for the frequency scale, and from 0 (=none) to 4 (=great extent) for the intensity scale so higher scores reflect a greater degree of moral distress. For each item a composite score is computed by multiplying the frequency and the intensity score.

The total MDS-R score ranges from 0 to 16 and is obtained by summing the frequency x intensity scores and dividing the total by the number of items. As the Italian MDS-R is composed of four subscales (Futile care, Ethical misconduct, Deceptive communication and Poor teamwork), a score for each subscale is also provided. The subscales' scores are obtained by averaging the scores for each subscale. The Futile care subscale (FC) is composed of 3 items (3,2,6) measuring the moral distress due to overtreatment or unnecessary care. The Ethical misconduct subscale (EM) comprises 5 items (10,7,11,5,9) measuring the moral distress related to a wide range of ethically wrong behaviors, such as increasing the dose of sedatives for an unconscious patient that could hasten the patient's death or not reporting a medical error. The Deceptive communication subscale (DC) is

composed of 3 items (14,1,4) relating to misleading or incomplete communication with patients. The Poor teamwork subscale (PT) is composed of 3 items (13,8,12) measuring morally distressing situations caused by poorly function and disorganized teams.

### *Family satisfaction*

To assess family satisfaction with care in the ICU, the *Family Satisfaction in the ICU* (FS-ICU) questionnaire was used (Wall, Engelberg, Downey, Heyland, & Curtis, 2007). FS-ICU is a well-established questionnaire used in several studies to assess family satisfaction in the ICUs (Heyland & Tranmer, 2001). The FS-ICU was validated by Wall et al., (2007) and consists of 24 items measuring two dimensions: family satisfaction with care (14 items) and satisfaction with decision making (10 items). For each item family members have to rate on a 5-point Likert scale (ranging from 1=excellent to 5=very poor) the quality of care received on several aspects. According to Wall et. (2001), scores on each item are converted from 0 to 100 based on the following scale: excellent= 100, very good =75, good= 50, poor= 25, very poor= 0, so that higher scores indicate a high satisfaction with care.

Although a total instrument score and two separate sub-scales scores could be obtained, some authors discourage the use of composite measures as recent confirmatory factor analysis of the English version showed significant misfit of the 2-factor model (Curtis, Downey, & Engelberg, 2016). As the Italian FS-ICU has not been validated in Italy, we considered the scores obtained on each item in the analysis.

The FS-ICU has been translated into several languages, including Swiss Italian (Pagnamenta et al., 2016). In this study we used the Swiss Italian version after minor changes were made to the wording of items in order to adopt the questionnaire to the Italian ICU settings.

## **Statistical analysis**

Descriptive statistics was used to describe sociodemographic and clinical data of clinicians, family members and patients. To identify what aspects of care were the most and less satisfying for families, mean values for family satisfaction for each item of the FS-ICU were calculated, considering the scores from all family members in the 5 ICUs. Internal consistency of the Italian MDS-R and the FS-ICU was evaluated using the Cronbach  $\alpha$  coefficient.

As family satisfaction was a general measure regarding the ICU and was not related to a single clinician, data analysis was conducted on a unit-level. For each ICU, mean values of clinicians' moral distress, including the 4 subscales, was calculated. In addition, the mean value of physicians' and nurses' moral distress was calculated. For what concerns the family satisfaction, for each ICU the mean value of family satisfaction was computed for each item of the FS-ICU.

Tukey multiple comparison post-hoc analysis was performed to compare moral distress and family satisfaction items of each ICU with the others, using hospitals as independent variable and moral distress and family satisfaction items as dependent variables. T-test for independent samples was conducted to explore differences in moral distress between physicians and nurses.

As data on family satisfaction were non-normally distributed, Spearman rank correlation (Spearman  $\rho$ ) was used to explore the relationship between moral distress and family satisfaction. Spearman correlations were performed between physicians' and nurses' moral distress scores, including the 4 subscales, and family satisfaction scores for each FS-ICU item. As FS-ICU has 24 items, only those presenting a correlation coefficient with a statistical significance of  $p < .05$  are reported in the Results' Tables. For the present study data analysis was conducted with SPSS22.

## **4. Results**

### **Participants**

A total of 183 clinicians (76 physicians and 107 nurses) and 102 family members were surveyed. The response rates of physicians, nurses and family members for each ICU are reported in Table 1.

Of the 183 questionnaires administered to clinicians, 126 (67%) were returned and 122 were correctly completed and used for this study (45 physicians and 77 nurses). Of the 102 questionnaires mailed to family members, 68 (67%) were returned and 59 were correctly completed and used for this study.

**Table 1. Distribution of clinicians and family members for each ICU**

Hospital	Physicians	Nurses	Total clinicians	Family members (FM)	Physician Response rate %	Nurses Response rate %	FM Response rate %
1	17	26	43	8	41	81	67
2	11	17	28	14	100	76	65
3	9	19	28	25	78	63	57
4	17	12	29	15	41	42	63
5	22	33	55	40	68	85	56
<b>Total</b>	<b>76</b>	<b>107</b>	<b>183</b>	<b>102</b>	<b>62</b>	<b>74</b>	<b>67</b>

Sociodemographic and professional characteristics of physicians and nurses who responded to the survey are reported in Table 2. Sociodemographic and clinical characteristics of patients and family members who completed the questionnaire are listed in Tables 3.

**Table 2. Physicians and nurses' socio-demographic characteristics**

Characteristic	Physicians (n=45)	Nurses (n=77)
Age		
Mean (SD)	45.36 (10.51)	39.68 (7.38)
Gender		
Male	22 (49%)	36 (47%)
Female	23 (51%)	41 (53%)
Marital status		
Single	9 (20%)	16 (21%)
Married/co-habiting	34 (76%)	56 (74%)
Widow/divorced	2 (4%)	4 (5%)
Years of experience in ICU		
Mean (SD)	14.46 (9.01)	11.23 (7.04)
Hours worked per week		
Mean (SD)	46.05 (6.3)	37.63 (3.58)
Death of a patient in the last two weeks		
Yes	36 (80%)	49 (65%)
No	9 (20%)	27 (35%)

**Table 3. Sociodemographic and clinical characteristics of patients and family members**

Characteristic	Family members (N=59)	Patients (N=59)
Gender		
Male	23 (39%)	38 (64%)
Female	36 (61%)	21 (36%)
Age		
Mean (SD)	57.30 (11.05)	67.2 (17.09)
Relationship with the patient		-
Parent	5 (8%)	
Spouse/partner	24 (41%)	
Daughter/son	24 (41%)	
Sister/brother	4 (7%)	
Other	2 (3%)	
Educational level		-
Middle school	22 (38%)	
High school	29 (50%)	
Graduate	5 (9%)	
Post-graduate	2 (3%)	
Previous experience with ICU		-
Yes	20 (34%)	
No	39 (66%)	
Place of residence		-
Same town as hospital	28 (47%)	
Another town	31 (52%)	
Lives with patient		-
Yes	47 (80%)	
No	12 (20%)	
SAPS II at admission	-	
Mean (SD)		37.00 (16.58)
Principal reason for admission to ICU		
Sepsis		7 (12%)
Cardiovascular		5 (9%)
Respiratory		11 (20%)
Postoperative care		15 (27%)
Gastrointestinal		5 (9%)
Trauma		13 (23%)
ICU stay (days)		
Mean (SD)		4.96 (6.57)
ICU mortality*		6 (10%)

\*One month after the ICU hospitalization

### Moral distress and family satisfaction

The reliability of the total scales' scores was measured with Cronbach's  $\alpha$ . Cronbach  $\alpha$  of the MDS-R was .76, and Cronbach  $\alpha$  of the FS-ICU was .96. The Cronbach  $\alpha$  value of MDS-R subscales was .74 for Futile care, .44 for Ethical misconduct, .45 for Deceptive communication, and .63 for Poor

teamwork. The Cronbach  $\alpha$  value of the subscales was low because of the small number of items for each subscale, and the small sample size (Tavakol, & Dennick, 2011).

Mean values of moral distress among physicians and nurses in the 5 ICUs are reported in Table 4. No significant differences were found in clinicians' moral distress across ICUs and no differences were found in overall moral distress scores between physicians and nurses. Considering the moral distress subscales, physicians presented higher scores on Deceptive communication than nurses ( $T=3.469$   $p=.001$ ).

**Table 4. Mean values of moral distress in physicians (MD) and nurses (RN) at each ICUs**

ICU	Moral Distress		Futile Care		Ethical Misconduct		Deceptive Communication		Poor Teamwork	
	MD	RN	MD	RN	MD	RN	MD	RN	MD	RN
1	3.21	3.13	2.39	4.88	2.33	1.61	3.00	2.75	5.72	4.85
2	3.66	3.24	3.82	4.71	2.76	3.12	5.87	2.84	5.20	2.38
3	4.13	3.47	6.29	6.33	2.14	2.37	6.48	2.77	2.95	3.39
4	3.97	4.46	6.57	9.33	2.53	2.64	4.52	2.20	5.00	4.87
5	3.41	3.60	4.93	6.62	2.06	2.12	3.02	2.45	4.55	4.20

For what concerns family satisfaction, differences among ICUs were found in the consideration of family needs ( $F=3.209$ ;  $p=.020$ ) and in the provision of emotional support to family ( $F=2.729$ ;  $p=.038$ ). On both items, the ICU of hospital 1 scored significantly higher than the ICU of hospital 5. The mean values of family satisfaction for each FS-ICU item, considering all ICUs, are reported in Table 5 in ascending order.

The highest satisfaction regarded the amount of time given to voice concerns and receive answers, the amount of care the patient received and the courtesy by staff toward patient, whereas the lowest perception of family satisfaction regarded the atmosphere of the ICU waiting room, the control over patient's care and the inclusion in the decision making process.

**Table 5. Family satisfaction items in ascending order**

FS-ICU item	Mean (N=59)	SD
24. adequate time to voice concerns and receive answers.	85.69	32.71
14. satisfaction with level or amount of care patient received.	84.32	18.51
1. courtesy, respect, and compassion by staff toward patient.	83.90	17.84
11. skill and competence of doctors.	83.47	17.75
7. coordination and teamwork by staff.	82.63	18.13
9. skill and competence of nurses.	82.20	20.79
8. courtesy, respect, and compassion by staff toward family	80.08	18.44
2. management of pain.	79.06	20.18
3. management of breathlessness.	78.78	23.23
18. honesty of information provided about patient's condition	77.91	23.78
19. completeness of information about what was happening.	77.22	24.59
5. how well staff considered family needs	77.12	20.91
17. staff provided understandable explanations.	76.69	22.68
20. consistency of information about patient's condition.	76.38	25.51
15. frequency of communication by doctors.	75.85	24.99
10. frequency of communication by nurses.	75.85	22.73
22. feel supported during the decision-making process.	74.58	22.98
16. willingness of staff to answer questions.	74.53	24.34
6. how well staff provided emotional support toward family.	74.15	23.20
4. management of agitation.	73.32	24.50
12. atmosphere of the ICU.	72.49	23.08
21. feel included in the decision-making process.	69.49	30.11
23. feel control over the care of the patient.	63.98	36.34
13. atmosphere of the ICU waiting room.	55.47	28.21

Correlation between clinicians' moral distress scores, including the 4 subscales, and family satisfaction scores are reported in Table 6. Moral distress of clinicians was negatively correlated with the family satisfaction as to the inclusion in the decision making process. Figure 1 shows the correlation between clinicians' moral distress and family satisfaction regarding the inclusion in decision making.

**Table 6. Correlation (Spearman  $\rho$ ) between clinicians' moral distress and family satisfaction**

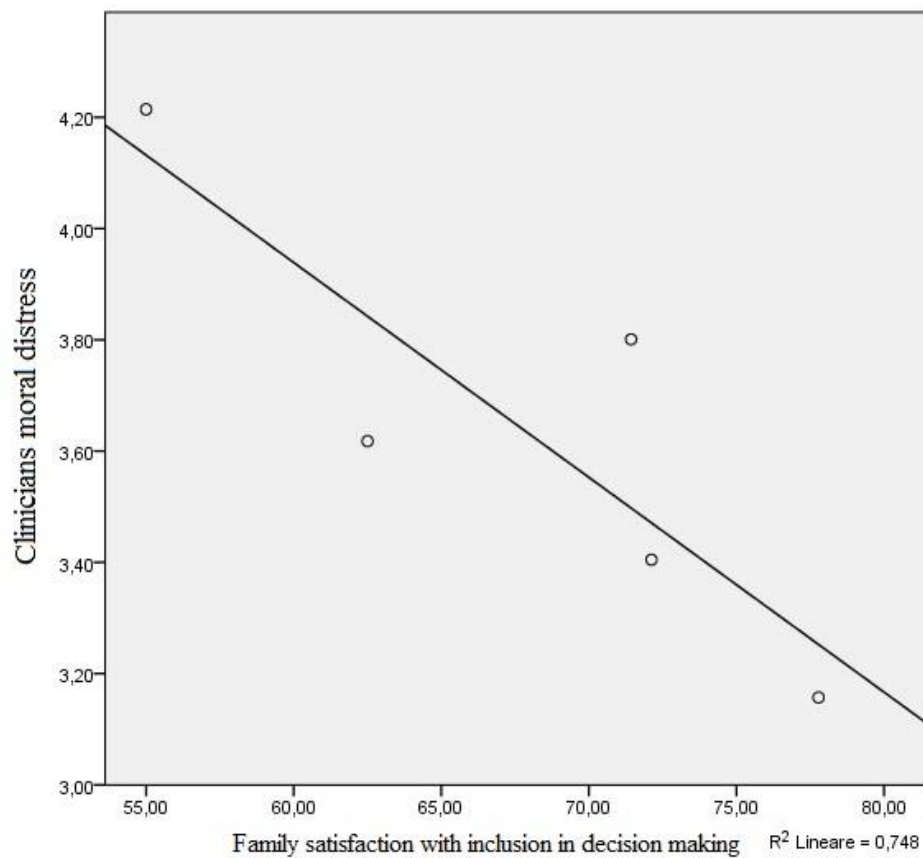
Family satisfaction	Clinicians moral distress				
	Total MD	FC	EM	PT	DC
<i>FS-ICU items+</i>					
11 Skill and competence of ICU doctors	-.100	.300	-.700	.900*	-.600
14 Satisfaction with the level or amount of care patient received	-.300	.100	-.900*	.300	-.200
21 Inclusion in the decision making process	-.900*	-.800	-.300	.100	.100

\* $p < .05$  \*\* $p < .01$

+ As FS-ICU has 24 items, only those presenting a statistical significance of  $p < .05$  are reported in the Table.



**Figure 1. Correlation between clinicians' moral distress and family satisfaction with decision making**



Correlations between moral distress of physicians and nurses and family satisfaction are reported in Table 7 and 8, respectively. Moral distress of physicians negatively correlated with the family scores regarding the courtesy, respect and compassion shown toward the patient ( $\rho = -.900$ ;  $p = .037$ ). Looking at the moral distress subscales, physicians' scores on Futile care correlated with the family inclusion in the decision making process ( $\rho = -.900$ ;  $p = .037$ ), and scores on Deceptive communication correlated with the perceived courtesy, respect and compassion shown toward the patient ( $\rho = -.900$ ;  $p = .037$ ).

Moral distress of nurses correlated with family satisfaction regarding the management of patient's breathlessness and agitation ( $\rho = -.900$ ;  $p = .037$ ), the provision of emotional support toward family ( $\rho = -.900$ ;  $p = .037$ ), the understanding of information ( $\rho = -.900$ ;  $p = .037$ ), and the inclusion in the decision making process ( $\rho = -1.00$ ;  $p = .000$ ). Looking at the moral distress subscales, nurses'

scores on Futile care correlated with family scores on inclusion in the decision making process ( $\rho=-.900$ ;  $p=.037$ ), scores on Ethical Misconduct correlated with family satisfaction with the level or amount of care patient received ( $\rho=-.900$ ;  $p=.037$ ), and nurses' scores on Poor teamwork correlated with skill and competence of ICU doctors ( $\rho=.900$ ;  $p=.037$ ).

**Table 7. Correlation (Spearman  $\rho$ ) between physicians' moral distress and family satisfaction**

	Physicians moral distress				
	Total MD	FC	EM	PT	DC
<i>FS-ICU items+</i>					
1. Courtesy, respect and compassion toward patient	-1.000**	-.800	-.100	.700	-.900*
21. Inclusion in the decision making process	-.500	-.900*	.200	.600	-.200

\* $p < .05$  \*\* $p < .01$

+ As FS-ICU has 24 items, only those presenting a statistical significance of  $p < .05$  are reported in the Table.

**Table 8. Correlation (Spearman  $\rho$ ) between nurses' moral distress and family satisfaction**

	Nurses moral distress				
	Total MD	FC	EM	PT	DC
<i>FS-ICU items+</i>					
3. Management of breathlessness	-.900*	-.700	-.500	-.300	.600
4. Management of agitation	-.900*	-.700	-.500	-.300	.600
6. Provision of emotional support toward family	-.900*	-.800	-.100	-.200	.600
11. Skill and competence of ICU doctors	.000	.400	-.700	.900*	-.700
14. Satisfaction with the level or amount of care patient received	-.400	.000	-.900*	.300	-.100
17. Understanding of information	-.900*	-.700	-.500	-.300	.600
21. Inclusion in the decision making process	-1.000**	-.900*	-.300	-.400	.700

\* $p < .05$  \*\* $p < .01$

+ As FS-ICU has 24 items, only those presenting a statistical significance of  $p < .05$  are reported in the Table.

## 5. Discussion

Recent studies highlighted the importance of clinicians' well-being in the provision of good quality care (Meier, Beck & Morrison, 2001). However, to our knowledge, no study has ever explored the relationship between clinicians' moral distress and patient satisfaction. This study is the first to

preliminary explore the relationship between the moral distress of physicians and nurses, and the family satisfaction with care in the Intensive Care Units (ICU).

Analysis of overall family satisfaction showed that families are generally satisfied with ICU care, especially for what concerns the time given to voice their concerns and receive answers, and the amount of care provided to the patient. However, our findings highlighted two areas of improvement that relate to the atmosphere and organization of the ICU and its waiting room, and to the control over patient care and family inclusion in the decision-making process.

The necessity of rethinking the ICU spaces in order to promote a more family-centered care has been already advocated by other authors (Lamiani, Giannini, Fossati, Prandi, & Vegni, 2013). Possible changes include a better organization of the ICU spaces that could preserve the privacy of patients and family members, and a greater attention to spaces that are external to the ICU, such as waiting rooms or obituaries. These spaces are peripheral to medical care, but may have a profound emotional impact on families. Consistently with other studies (Meyer, Burns, Griffith, & Truog, 2002; van der Heide, Deliens, Faisst, & al., 2003), family members were less satisfied regarding the control over the patient's care and the inclusion in the decision-making process. This evaluation may reflect the general tendency of the Italian clinicians not to share information and decisions with family members (Mauri et al., 2009), as it happens in a paternalistic model of care (Emanuel & Emanuel, 1992). The identification of these critical factors can be the starting point to enhance the quality care by improving the ICU structures, making the waiting rooms more conformable, and promoting a greater engagement and control of families in the care decisions regarding their loved ones.

The analysis of the relationship between moral distress and family satisfaction suggests that moral distress of clinicians is negatively associated with those aspects of family satisfaction that regard the ethics of clinical practice. This finding suggests that moral distress and family satisfaction could be viewed as two sides of the same reality. When care is not provided according to ethical standards, clinicians suffer and family members are less satisfied.

Interestingly, moral distress of physicians and nurses was associated with different aspects of family satisfaction suggesting that physicians and nurses play different important roles in patient's care. Moral distress of nurses was found to be related with satisfaction regarding several practical aspects of care, such as management of breathlessness and agitation, provision of emotional support, understanding of information, and inclusion in the decision making process. It is possible that nurses, due to their close professional relationship with patients, are more aligned with the family practical needs and perceptions. This hypothesis is supported by other studies which found that family satisfaction with care correlated with several nurse ratings of the ICU quality, including assessments of meeting family needs and perceived barriers to care (Wall et al., 2007). It is also possible that nurses are perceived by families as the primary interface and interlocutors with the healthcare system. Therefore, nurses' distress may have a greater impact on the family members' perception of care (Schoenfelder, Klewer, & Kugler, 2011). Physicians' moral distress was related to only one aspect of family satisfaction that concerns the courtesy, respect and compassion shown toward the patient. Moral distress of physicians seems to be related to a more abstract and global perception of family members satisfaction concerning the humanization of care. This result is consistent with an enlarged view of the concept of humanization of care that encompasses aspects such as considering the patients' illness experience, respecting patients' dignity and autonomy, and facilitating access to healthcare services (Marin, Storniolo & Moravcik , 2010).

Looking at the moral distress subscales, our findings allowed us to identify specific aspects of family satisfaction that are associated with different components of moral distress. Our findings showed that the higher physicians and nurses scored on Futile care, the less family members felt involved in the decision-making process. As the lack of involvement in decision making emerged in our study as one of the main causes of family dissatisfaction, this finding is particularly relevant to improve care. Futile care, such as overtreatment, reflects the care that is provided without medical benefit or even with harm to the patient (Kasman, 2004). Clinicians often provide futile care due to

their orientation towards curative treatment, discomfort with death and dying, concerns about legal risk and poor communication skills (Willmott et al., 2016). It is possible that the provision of futile care reflects a situation where clinicians make decisions alone, without consulting or engaging the family. Indeed, several studies in pediatric intensive care found a significant disparity between physician and parent recognition of end-of-life care, indicating that parents whose children died in the ICU had considered the idea of withdrawing life-sustaining treatment before any formal discussion with the healthcare team (Meyer et al., 2002). Engaging families in the decision-making process through family meetings could diminish family dissatisfaction and lessen moral distress of physicians and nurses regarding futile care.

Our findings showed that deceptive communication on physicians' part was negatively associated with family members' satisfaction with the courtesy, respect and compassion shown toward the patient. An honest, accurate and sensitive communication by physicians seems therefore to play an important role for families' satisfaction. This finding is consistent with other studies that found that a honest, accurate, and patient-centered communication by physicians is appreciated by parents and is associated with fewer malpractice claims (Salins, Deodhar, & Muckaden, 2016; October et al., 2016; Levinson et al., 1997).

The higher the nurses' scores on Ethical misconduct, the lower the satisfaction with the level or amount of care patient received. It is possible that unethical professional behaviors, such as not communicating a medical error or ordering unnecessary treatments for fear of legal consequences, do not go unrecognized by families who, not understanding the reasons for treatment, may feel unhappy with the amount of care provided.

The higher the nurses' score on Poor teamwork, the higher the satisfaction with the skills and competence of doctors. Generally, it is known that a poor teamwork culture may negatively impact patient satisfaction with care (Meterko, Mohr, & Young, 2004). However, this finding may indicate that, within an atmosphere of conflict and dissatisfaction among nurses, physicians may emerge as more efficient and competent to the family members' judgment.

There are several limitations to this study that need to be discussed. The clinicians were drawn from a convenience sample of only 5 hospitals belonging to a single region in the north of Italy. Moreover, as patients and families admitted to the ICU go through a stressful and critical time, their response rate to the questionnaire was low, hence the generalizability of our findings is limited. Another limitation is related to the self-selection of family members. It is possible that family members who returned the questionnaires were the most satisfied or dissatisfied with the care received, therefore the sample could not be considered as representative of the population. Although this study provides some preliminary information on the relationship between moral distress and family satisfaction, the causal direction of the relationship was not explored. Further studies on larger samples are needed to clarify the relationship between moral distress and family satisfaction. Another limitation concerns the use of the FS-ICU to measure family satisfaction. As the Italian version of the FS-ICU has not been validated and previous work on the factorial structure of the English version did not confirm the 2-factor model, it was not possible to use the total score and subscale scores in the analysis. The use of single item scores in the analysis is a more conservative, yet less statistically robust choice. Finally, moral distress and family satisfaction were both measured through self-reported questionnaires and therefore the data are subject to the limitations of self-reported measures.

Despite these limitations, this work offered preliminary data on the relationship between moral distress and family satisfaction. Moral distress of physicians and nurses was found to be related to specific aspects of family satisfaction, such as inclusion in the decision-making process, level or amount of care provided, and courtesy, respect and compassion shown toward patient. These findings suggest that moral distress, as a form of distress pertaining to the professionalism and ethics of clinicians, may be an indicator of low quality care. Educational and supportive initiatives such as ethical rounds, debriefing sessions and coaching could be offered for clinicians to promote moral resiliency and improve the quality of care (Rushton, 2006, 2016).

## **CHAPTER 6. Discussion and conclusions**

### **1. Theoretical contributions**

A large body of qualitative nursing literature highlighted that moral distress is a relevant factor affecting clinicians' well-being at work, impacting several organizational outcomes such as job satisfaction and retention (Wilkinson, 1988; Elpern, Covert & Kleinpell, 2005; Gutierrez, 2005; Ferrel, 2006; Ando, 2016). This thesis is the first attempt to empirically explore the theme of moral distress within the perspective of organizational psychology by adopting a quantitative approach.

Specifically, this thesis offered some important theoretical contributions to the study on moral distress. First, this thesis contributed to clarify the structure of the construct of moral distress. So far, in the literature moral distress has been theoretically described as a mono-dimensional construct. Only recently, some scholars have begun to suggest that moral distress could be better conceptualized as a concept composed of several dimensions (McCarty & Gastmans, 2015). The exploratory and confirmatory factor analysis conducted in this thesis revealed that moral distress is determined by four latent variables, namely Futile care, Deceptive communication, Ethical misconduct, and Poor teamwork. This finding provides empirical evidence that supports the multidimensionality of moral distress, meaning that there are different correlated factors contributing to it (Soleimani et al., 2016).

Second, this thesis explored, for the first time in the literature, the protective factors of moral distress, as well as its effects on clinicians' well-being and on the quality of care perceived by family members. For what concerns the protective factors, some studies found a correlation between the ethical climate and moral distress (Corley Minick & Elswick, 2005; Pauly et al., 2009; Silen et al., 2011; Sauerland et al., 2014). However, as they used correlational designs, the causality of the relationship was not known. This thesis expanded the literature on protective factors by exploring the mediating effect of moral distress in the relationship between value congruence and depression. Regarding the consequences of moral distress, although some qualitative studies reported

that moral distress is followed by negative emotions (Wilkinson, 1988; Kälvemark et al., 2004; Austin et al., 2005; Elpern, Covert & Kleinpell, 2005; Gutierrez, 2005), no study has ever explored, through a quantitative approach, the impact of moral distress on clinicians' psychological well-being and on the quality of care as reflected by family members' ratings of the service received. These findings are particularly relevant for those healthcare organizations that want to promote clinicians' health and good quality care.

Another relevant aspect of this work is the inclusion of interdisciplinary participants in the study of moral distress. Compared to other research in the field, which focused mainly on nurses, a multidisciplinary perspective was adopted by gathering data from physicians, nurses, and family members. This approach allowed us to discover that moral distress is a problem equally affecting physicians and nurses, even if with different specificities. Moral distress was also found to be related to family members' ratings of quality of care, thus suggesting that moral distress and family satisfaction may be "two sides of the same coin". When ethical standards of care are not met, clinicians suffer and family members are less satisfied.

Another contribution relates to the methodological aspects of this research. Within the large body of literature on moral distress, mainly composed of qualitative studies, this work added to the field by presenting quantitative data collected through validated questionnaires and analyzed through structural equation models. This thesis, offered a preliminary contribution to the Italian validation of the *Moral Distress Scale-Revised* (MDS-R). This is an important advancement considering that the English version of the MDS-R has not been validated, thus jeopardizing the trustworthiness and validity of the results that are based on its use. Upon validation of the scale, it was possible to explore the relationship between moral distress and other constructs in order to identifying protective factors and consequences of moral distress on clinicians' well-being and the quality of care.



## 2. Limitations

There are several limitations to this study. First, although the study was multicenter, the sample size of clinicians and family members was relatively small. ICUs are generally small units with a limited number of beds due to the high intensity care. As clinicians often work on busy schedules and family members pass through a delicate time in their lives, the number of clinicians and family members who accepted to participate in the study was limited. This might have influenced the socio-demographic characteristics of the sample and therefore the results cannot be considered as representative of the general population. Not all the hospitals agreed to participate in all the study parts because of time-related issues. This may have contributed to a self-selection bias.

The small number of participants affected the results of the studies conducted in several ways. In Study 1, exploratory and confirmatory factor analysis were conducted on the same sample to validate the Italian MDS-R scale. In this study, no statistical differences between physicians' and nurses' moral distress were found. The lack of effect may be due to the limited sample size in each professional category that reduced the statistical power. Future studies with larger samples are needed to better explore the influence of profession on moral distress. In Study 2, despite the mediation model between value congruence and depression through moral distress proved significant, some of the fit indexes were below the adequate cutoff values. It is possible that the small sample size and the nature of the variables' distribution may have affected the fit indexes (Iacobucci, 2010). Moreover, given the small sample size, it was not possible to control for many variables. Although in the analysis we controlled for the presence of current emotional difficulties external to the job, other unmeasured factors (e.g., workload or death of a patient in the last week) may have influenced the mediation path from value congruence to depression through moral distress. Finally, in Study 3, because of the limited number of hospitals that participated in this study arm and because data were analyzed at a group level -given that family satisfaction referred to a unit level- only preliminary correlations between moral distress and family members' satisfaction were conducted. Causal relationships were not explored. In addition, the reliability of the MDS-R

subscales may have been affected by the small sample size coupled with the small number of items of each subscale.

Second, the results of all studies are based on self-reported measures and therefore are subject to the participants' intellectual and introspective ability, and to their need to provide socially acceptable responses. Although a specific attention was paid to guarantee clinicians' anonymity, it is possible that the stigma associated with moral distress or depression may have led to socially desirable responses. For what concerns the family satisfaction questionnaire, a ceiling effect was noted that influenced the family members' responses toward positive evaluations.

Third, the studies are cross-sectional as clinicians and family members were administered the questionnaires at the same point in time. Therefore, the relationship between value congruence, moral distress and depression have to be interpreted with caution especially for what concerns the direction of causality. Indeed, it is also possible to hypothesize other concurrent models of relationships between variables that should be tested. The same attention has to be paid when interpreting the association between clinicians' moral distress and family satisfaction with care.

### **3. Practical implications**

Based on the results of this thesis, it is possible to describe some practical implications. Overall, findings from this thesis suggest that moral distress is a phenomenon that - although of moderate intensity- needs to be addressed among critical care clinicians as it can lead to depression and it is associated with negative ratings of quality of care.

Several authors described specific strategies and group-based interventions to prevent moral distress among nurses (Rushton, 2006; Beumer, 2008; Lilly et al., 2000; Puntillo & McAdam, 2006). The American Association of Critical Care Nurses, which targeted moral distress as a priority area, has developed the 4 A's approach (Ask, Affirm, Assess, and Act) to address and reduce moral distress (Rushton, 2006). Other authors described the implementation of ethical rounds, group discussion forum and communication skills workshops (Beumer, 2008; Lilly et al.,

2000; Puntillo & McAdam, 2006). Although these interventions are certainly valuable, they are not based on a clear theoretical model of moral distress nor their efficacy have been assessed. The validation of the Italian MDS-R, which presented a 4 factor structure, presents several advantages for the assessment of moral distress and for the planning and evaluation of preventive interventions against it. The MDS-R can be used as a screening tool to understand what factors, contributing to moral distress, need to be more urgently addressed in a specific ICU. In addition, tailored interventions can be implemented to address these components. Just to mention one example, communication skills trainings could be offered to clinicians to decrease “Deceptive communication” factor in case this is the subscale with the highest score. Based on the results of this thesis, an interdisciplinary approach to healthcare professionals’ education seems to be an essential strategy to decrease moral distress, because it helps to strengthen the collaboration and teamwork between the different team members.

Within this current research, in order to promote the transferability of research results to practice, we offered to the ICU clinicians the opportunity to organize a feedback meeting in order to share the research findings. Three meetings were conducted with nurses and physicians of three hospitals. Even though the data on the efficacy of these meetings were not collected, the sharing of information regarding the moral distress assessment was a useful input for discussion among clinicians.

Another interesting finding that emerged from this work is that value congruence was proved to be an important protective factor of moral distress. This finding has important practical implications for the healthcare organizations. Cultivating a positive ethical culture and fostering value congruence between individual and organizational values should be considered as priority actions to prevent moral distress and depression among critical care clinicians.

#### **4. Recommendations for future research**

The findings of this thesis highlighted several research areas that would benefit from further investigation. The studies conducted focused on the protective factors that are organizational in nature, such as value congruence and job control. However, based on the literature on moral distress, there may be other organizational factors that could play a role in determining or preventing moral distress, such as social integration, relational climate, workload and burnout. Future studies could assess the role of these factors in relationship with moral distress.

As several qualitative studies argued that moral distress is largely shaped by the individual experience and personal characteristics, future research could extend the literature on moral distress by exploring the individual factors, such as assertiveness, flexibility, empathy, and personality traits that can play a significant role in determining moral distress. Moreover, as moral distress has been defined as a form of job-related stress, understanding the role that individual or organizational coping strategies may have in determining stress-related or depressive symptoms could be another promising avenue of research.

Finally, future research on moral distress would benefit from the use of longitudinal studies, with repeated observations of the same variables across time, that could better test the causality of relationships. Longitudinal research designs could be suitable to test the crescendo effect model of moral distress (Epstein & Hamric, 2009) which remains an area that requires further empirical testing and investigation.

## REFERENCES

- ABIM Foundation. American Board of Internal Medicine. (2002). Medical professionalism in the new millennium: a physician charter. *Annals of Internal Medicine*, 136(3), 243.
- Abizanda, R., Almendros Corral, L., & Balerdi Perez, B. (1994). Ethical aspects of intensive medicine. Results of an opinion survey. *Medicina Clínica*, 102, 521-526.
- American Psychiatric Association. (2013) *Diagnostic and statistical manual of mental disorders*, (5th ed.). Washington, DC: Author.
- Anagnostopoulos, F., Liolios, E., Persefonis, G., Slater, J., Kafetsios, K., & Niakas, D. (2012). Physician burnout and patient satisfaction with consultation in primary health care settings: evidence of relationships from a one-with-many design. *Journal of Clinical Psychology in Medical Settings*, 19, 401-410
- Ando, M. (2016). Relationships among moral distress, sense of coherence, and job satisfaction. *Nursing Ethics*. Advance online publication. pii: 0969733016660882.
- Argentero, P., Dell'Olivo, B., & Ferretti, M. S. (2007). Staff burnout and patient satisfaction with the quality of dialysis care. *American Journal of Kidney Diseases*, 51, 80-92.
- Austin, W., Rankel, M., Kagan, L., Bergum, V., & Lernermeier, G. (2005). To stay or to go, to speak or stay silent, to act or not to act: Moral distress as experienced by psychologists. *Ethics and Behavior*, 15(3), 197-212.
- Azoulay, É., Pochard, F., Kentish-Barnes, & et al. (2005). Risk of post-traumatic stress symptoms in family members of intensive care unit patients. *American Journal of Respiratory Critical Care Medicine*, 171, 987-994.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and Social Psychology*, 51(6), 1173.
- Barrett, P. (2007). Structural equation modelling: Adjudging model fit. *Personality and Individual Differences*, 42, 815–824.
- Beck, A. T., Steer, R. A., & Brown, G. K. (2006). *Beck Depression Inventory-II*. Firenze: Giunti OS.
- Beck, A. T., Steer, R. A., Ball, R., & Ranieri, W. (1996). Comparison of Beck Depression Inventories -IA and -II in psychiatric outpatients. *Journal of Personality Assessment*, 67, 588–597.
- Beck, C.T. (2011). Secondary traumatic stress in nurses: A systematic review. *Archives of Psychiatric Nursing*, 25(1),1-10.

- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107, 238-246.
- Bentler, P. M. (1992). On the fit of models to covariances and methodology to the Bulletin. *Psychological Bulletin*, 112, 400–404.
- Berg, G.M., Harshbarger, J.L., Ahlers-Schmidt, C.R., & Lippoldt, D. (2016). Exposing compassion fatigue and burnout syndrome in a trauma team: A qualitative study. *Journal of Trauma Nursing*, 23(1), 3-10.
- Beumer, C. M. (2008). Innovative solutions: The effect of a workshop on reducing the experience of moral distress in an intensive care unit setting. *Dimensions of Critical Care Nursing*, 27(6), 263-267.
- Bisset, M.F. (2014). *The role of values and value congruence for job satisfaction, person organisation fit, work engagement and resilience* (Doctoral thesis, University of Canterbury, Christchurch, New Zealand). Retrived from <http://ir.canterbury.ac.nz>
- Bonde, J. P. E. (2008). Psychosocial factors at work and risk of depression: a systematic review of the epidemiological evidence. *Occupational and Environmental Medicine*, 65, 438–445.
- Borgogni, L., Galati, D., & Petitta, L., Centro Formazione Schweitzer (2005). Il questionario di Checkup organizzativo. Manuale dell'adattamento italiano (Organisational Checkup Survey, Manual of the Italian Adaptation). Firenze: O.S. Organizzazioni Speciali, Firenze [in Italian].
- Brazil, K., Kassalainen, S., Ploeg, J., & Marshall, D. (2010). Moral distress experienced by health care professionals who provide home-based palliative care. *Social Science & Medicine*, 71, 1687-1691.
- Bride, B. E., Robinson, M. M., Yegidis, B., & Figley, C. R. (2004). Development and validation of the Secondary Traumatic Stress Scale. *Research on Social Work Practice*, 14, 27-35.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways to assess model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: Sage.
- Browning, A.M. (2013) Moral Distress and Psychological Empowerment in Critical Care Nurses Caring for Adults at end of Life. *American Journal of Critical Care*, 22(2), 143-151.
- Burgess, L., Irvine, F., & Wallymahmed, A. (2010). Personality, stress and coping in intensive care nurses: a descriptive exploratory study. *Nursing in critical care*, 15(3), 129-140.
- Burston, A. S., & Tuckett, A. G. (2013). Moral distress in nursing: contributing factors, outcomes and interventions. *Nursing Ethics*, 20, 312-324.

- Catlin, A., Armigo, C., Volat, D., Vale, E., Hadley, M. A., Gong, W., Bassir, R., & Anderson, K. (2008) Conscientious objection: a potential neonatal nursing response to care orders that cause suffering at the end of life? Study of a concept. *Neonatal Network*, 27, 101-108.
- Cavaliere, T.A., Daly, B., Dowling, D., & Montgomery, K. (2010). Moral distress in neonatal intensive care unit RNs. *Advances in Neonatal Care*, 10(3),145-56.
- Chen,P.W. (2009, February 5). When doctors and nurses can't do the right things. *The New York Times*. Retrieved from <http://www.nytimes.com>
- Cohen, J.S. & Erickson, J.M. (2006) Ethical dilemmas and moral distress in oncology nursing practice. *Clinical Journal of Oncology Nurses*, 10(6),775-80.
- Committee on Quality of Health Care in America. (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington: DC: National Academy Press.
- Corley, M. C. (2002). Nurse moral distress: a proposed theory and research agenda. *Nursing Ethics*, 9, 636-50.
- Corley, M. C., Elswick, R. K., Gorman, M., & Clor, T. (2001). Development and evaluation of a moral distress scale. *Journal of Advanced Nursing*, 33, 250-256.
- Corley, M.C. (2002). Nurse moral distress: a proposed theory and research agenda. *Nursing Ethics*, 9(6),636-50.
- Corley, M.C., Minick, P., Elswick, R.K., & Jacobs, M. (2005). Nurse moral distress and ethical work environment. *Nursing Ethics*, 12(4), 381-390.
- Cronbach, L.J., & Meehl, P.E. (1955). Construct validity in psychological tests. *Psychological Bulletin*,4, 281–302.
- Curtis, J. R., Downey, L., & Engelberg, R. A. (2016). The importance and challenge of measuring family experience with end-of-life care in the ICU. *Intensive Care Medicine*, 42, 1179-1181.
- Dalmolin, G. D. L., Lunardi, V. L., Lunardi, G. L., Barlem, E. L. D., & Silveira, R. S. D. (2014). Moral distress and burnout syndrome: are there relationships between these phenomena in nursing workers?. *Revista latino-americana de enfermagem*, 22, 35-42.
- De Veer, A.J., Francke, A.L., Struijs, A., & Willems, D.L. (2013). Determinants of moral distress in daily nursing practice: A cross sectional correlational questionnaire survey. *International Journal of Nursing Studies*, 50(1), 100-108.
- Deady, R., & McCarthy, J. (2010). A study of the situations, features, and coping mechanisms experienced by Irish psychiatric nurses experiencing moral distress. *Perspectives in Psychiatric Care*, 46, 209-220.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demandsresources

- Dodek, H., Wong, M., Norena, N., Ayas, S., Reynolds, S., Keenan, S., Hamric, A., Rodney, P., Stewart, M., & Alden, L. (2016). Moral distress in ICU professionals is associated with profession, age, and years of experience. *Journal of Critical Care*, 31, 178–182.
- Donchin, Y., & Seagull, F.J. (2002). The hostile environment of the intensive care unit. *Current Opinion in Critical Care*, 8 (4),316–320.
- Edwards, J. R., & Cable, D. M. (2009). The value of value congruence. *Journal of Applied Psychology*, 94(3), 654.
- Elpern, E. H., Covert, B., & Kleinpell, R. (2005). Moral distress of staff nurses in a medical intensive care unit. *American Journal of Critical Care*, 14, 523-530.
- Emanuel, E. J., & Emanuel, L. L. (1992). Four models of the physician-patient relationship. *Journal of the American Medical Association*, 267(16), 2221-2226.
- Embriaco, N., Azoulay, E., Barrau, K., Kentish, N., Pochard, F., Loundou, A., & Papazian, L. (2007). High level of burnout in intensivists: prevalence and associated factors. *American Journal of Respiratory and Critical Care Medicine*, 175, 686-692.
- Embriaco, N., Hraiech, S., Azoulay, E., Baumstarck-Barrau, K., Forel, J. M., Kentish-Barnes, N., Pochard, F., Loundou, A., Roch, A., & Papazian, L. (2012). Symptoms of depression in ICU physicians. *Annals of Intensive Care*, 2, 34.
- Embriaco, N., Papazian, L., Kentish-Barnes, N., Pochard, F., & Azoulay, E. (2007). Burnout syndrome among critical care healthcare workers. *Current Opinion in Critical Care*, 13,482 – 488.
- Engel, G.L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*,196,129-136.
- Epstein, E. G., & Hamric, A. B. (2009). Moral distress, moral residue, and the crescendo effect. *The Journal of Clinical Ethics*, 20, 330-42.
- Epstein, E.G. (2008). End-of-life experiences of nurses and physicians in the newborn intensive care unit. *Journal of Perinatology*,28(11), 771–778.
- Epstein, E.G., & Delgado, S. (2010) Understanding and Addressing Moral Distress. *The Online Journal of Issues in Nursing*, 15 (3), manuscript 1.
- Epstein, R.M., & Hundert, E.M. (2002). Defining and assessing professional competence. *Journal of the American Medical Association*, 287(2), 226-235.
- Ferrell, B. R. (2006). Understanding the moral distress of nurses witnessing medically futile care. *Oncology Nursing Forum*, 33, 922-930.



- Fiabane, E., Giorgi, I., Musian, D., Sguazzin, C., & Argentero, P. (2012). Occupational stress and job satisfaction of healthcare staff in rehabilitation units. *Medicina del Lavoro*, 103(6), 482-492.
- Fiabane, E., Giorgi, I., Sguazzin, C., & Argentero, P. (2013). Work engagement and occupational stress in nurses and other healthcare workers: the role of organizational and personal factors. *Journal of Clinical Nursing*, 22, 2614–2624.
- Figley, C. (1995). *Compassion fatigue: coping with secondary traumatic stress disorder in those who treat the traumatized*. New York, NY: Routeledge.
- Førde, R. & Aasland, O.G. (2008). Moral distress among Norwegian doctors. *Journal of Medical Ethics*, 34(7), 521-525.
- Fry, S.T., Harvey, R.M., Hurley, A.C., & Foley, B.J. (2002). Development of a model of moral distress in military nursing. *Nursing Ethics*, 9(4),373-87.
- Ganz, F.D., Raanan, O., Khalaila, R., Bennaroch, K., Scherman, S., Bruttin, M., Sastiel, Z., Fink, N.F., & Benbenishty, J. (2013). Moral distress and structural empowerment among a national sample of Israeli intensive care nurses. *Journal of Advanced Nursing*, 69(2), 415-424.
- Garman, A. N., Morris, S., & Corrigan, P. W. (2002). Staff burnout and patient satisfaction: Evidence of relationships at the care unit level. *Journal of Occupational Health Psychology*, 7, 235-241.
- Graham, J.R., Shier, M. L., & Nicholas, D. (2016). Workplace congruence and occupational outcomes among social service workers. *British Journal of Social Work*, 46, 1096–1114.
- Grandey, A. (2000). Emotion regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology*, 5 (1), 59–100.
- Gutierrez, K. M. (2005). Critical care nurses' perceptions of and responses to moral distress. *Dimensions of Critical Care Nursing*, 24, 229-241.
- Hamaideh, S.H. (2014). Moral distress and its correlates among mental health nurses in Jordan. *International Journal of Mental Health Nursing*, 23(1), 33-41.
- Hamric, A. B., & Blackhall, L. J. (2007). Nurse-physician perspectives on the care of dying patients in intensive care units: Collaboration, moral distress, and ethical climate. *Critical Care Medicine*, 35, 422-429.
- Hamric, A. B., Borchers, C. T., & Epstein, E. G. (2012). Development and testing of an instrument to measure moral distress in healthcare professionals. *AJOB Primary Research*, 3, 1-9.
- Hamric, A.B. (2012). Empirical research on moral distress: issues, challenges, and opportunities. *Hec Forum*, 24(1),39-49.

- Hanna, D. R. (2004). Moral distress: the state of the science. *Research and Theory for Nursing Practice*, 18, 73-93.
- Hanna, D.R. (2005). The lived experience of moral distress: nurses who assisted with elective abortions. *Research and Theory for Nursing Practice*, 19(1), 95-124.
- Hendriks, A. A., Vrielink, M. R., Smets, E. M., van Es, S. Q., & De Haes, J. C. (2001). Improving the assessment of patients' satisfaction with hospital care. *Medical Care*, 39, 270-283.
- Heyland, D. K., & Tranmer, J. E. (2001). Measuring family satisfaction with care in the intensive care unit: the development of a questionnaire and preliminary results. *Journal of Critical Care*, 16, 142-149.
- Higgins, J.P., & Green, S. (2011). *Cochrane handbook for systematic reviews of interventions* (Version 5.1.0). Available at: [www.cochrane-handbook.org](http://www.cochrane-handbook.org) (accessed 3 November 2014)
- Hoffman, B. J., & Woehr, D. J. (2006). A quantitative review of the relationship between person-organisation fit and behavioural outcomes. *Journal of Vocational Behaviour*, 68(3), 389-399.
- Hoffman, B. J., Bynum, B. H., Piccolo, R. F., & Sutton, A. W. (2011). P-O value congruence: How transformational leaders influence work group effectiveness. *Academy of Management Journal*, 54(4), 779-796.
- House, R. J., & Rizzo J. (1970). Role conflict and ambiguity as critical variables in a model of organizational behavior. *Organizational Behavior and Human Performance*, 7, 467-505.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Huffman, D.M., & Rittenmeyer, L. (2012.) How professional nurses working in hospital environments experience moral distress: a systematic review. *Critical Care Nursing Clinics of North America*, 24(1),91-100.
- Iacobucci, D. (2010). Structural equations modeling: Fit indices, sample size, and advanced topics. *Journal of Consumer Psychology*, 20(1), 90-98.
- Jameton, A. (1984). *Nursing practice: The ethical issue*. Englewood Cliffs, NJ: Prentice Hall.
- Jameton, A. (1993). Dilemmas of moral distress: moral responsibility and nursing practice. *AWHONN's Clinical Issues in Perinatal and Women's Health Nursing*, 4(4), 42-51.
- Jimenez, C., Navia-Osorio, P.M., & Diaz, C.V. (2010). Stress and health in novice and experienced nursing students. *Journal of Advanced Nursing*, 66(2), 442-455.
- Källemark, 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. *Social Science and Medicine*, 58(6),1075-84.

- Kane, R.L., Maciejewski, M., & Finch, M. (1997). The relationship of patient satisfaction with care and clinical outcomes. *Medical Care*,35(7),714-30.
- Karanikola, M., Giannakopoulou, M., Mpouzika, M., Kaite, C.P., Tsiaousis, G.Z., & Papathanassoglou, E.D. (2015). Dysfunctional psychological responses among Intensive Care Unit nurses: a systematic review of the literature. *Revista da Escola de Enfermagem da USP*, 49(5),847-57.
- Karanikola, M.N., Albarran, J.W., Drigo, E., Giannakopoulou, M., Kalafati, M., Mpouzika, M., Tsiaousis, G.Z., & Papathanassoglou, E.D. (2014) Moral distress, autonomy and nurse–physician collaboration among intensive care unit nurses in Italy. *Journal of Nursing Management*, 22(4), 472-484.
- Kasman, D.L.(2004). When is medical treatment futile? A guide for students, residents, and physicians. *Journal of General Internal Medicine* 2004;19:1053-6.
- Kelly, B. (1998). Preserving moral integrity: a follow-up study with new graduate nurses. *Journal of Advanced Nursing*, 28, 1134–45.
- Kirchler, E., & Hölzl, E. (2006) Twenty-five years of the Journal of Economic Psychology (1981–2005): A report on the development of an interdisciplinary field of research. *Journal of Economic Psychology*, 27(6), 793-804.
- Kline, R. B. (2010). *Principles and practice of structural equation modeling* (3rd ed). New York: Guilford Press.
- Kompanje, E.J., Piers, R.D., & Benoit, D.D. (2013). Causes and consequences of disproportionate care in intensive care medicine. *Current Opinion in Critical Care*, 19(6), 630-5.
- Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: A meta-analysis of person–job, person–organisation, person–group, and person–supervisor fit. *Personnel psychology*, 58(2),281-342.
- Laabs, C.A. (2007). Primary care nurse practitioners' integrity when faced with moral conflict. *Nursing Ethics*, 14,795-809.
- Lamiani, G., Borghi, L., & Argentero, P. (2015). When healthcare professionals cannot do the right thing: A systematic review of moral distress and its correlates. *Journal of Health Psychology*. Advance online publication.
- Lamiani, G., Giannini, A., Fossati, I., Prandi, E., & Vegni, E. (2013). Parental experience of end-of-life care in the Pediatric Intensive Care Unit. *Minerva Anestesiologica*, 79, 1334-1343.
- Lamiani, G., Setti, I., Barlascini, L., Vegni, E., & Argentero, P. (2016). Measuring moral distress among critical care clinicians: Validation and psychometric properties of the Italian Moral

- Distress Scale-Revised (MDS-R). *Critical Care Medicine*. Advance online publication. Doi: 10.1097/CCM.0000000000002187.
- Lawrence, L.A. (2011). Work engagement, moral distress, education level, and critical reflective practice in intensive care nurses. *Nursing forum*, 46(4), 256-68.
- Lazarus, R., & Folkman, S. (1986). Cognitive theories of stress and the issue of circularity. In M.H. Appley & R.A. Trumbull (Eds.), *Dynamics of stress*. New York: Plenum Press.
- Lazzarin, M., Biondi, A., & Di Mauro, S. (2012). Moral distress in nurses in oncology and haematology units. *Nursing ethics*, 19(2), 183-195.
- Le Fevre, M., Kolt, G.S., & Matheny, J. (2006). Eustress, distress and their interpretation in primary and secondary occupational stress management interventions: Which way first? *Journal of Managerial Psychology* 21(6),547-565
- Leggett, J.M., Wasson, K., Sinacore, J.M., & Gamelli, R.L. (2013). A pilot study examining moral distress in nurses working in one United States burn center. *Journal of Burn Care and Research*, 34(5), 521-528.
- Leiter, M., & Maslach, C. (1982). *Burnout: The cost of caring*. Englewood Cliffs, NJ: Prentice Hall.
- Leiter, M., & Maslach, C. (2004). Areas of worklife: A structured approach to organizational predictors of job burnout. In P.L Perrewe & D.C Ganster (Eds.), *Emotional and Physiological Processes and Positive Intervention Strategies (Research in Occupational Stress and Well-being, Volume 3)*. Bingley, UK: Emerald Group Publishing Limited
- Leiter, M., & Maslach, C. (2005). *Organizational Checkup System. Come prevenire il burnout e costruire l'impegno*. Firenze: O.S. Organizzazioni Speciali.
- Leiter, M., Frank, E., & Matheson, T. (2009). Demands, values, and burnout. Relevance for physicians. *Canadian Family Physician*, 55, 1224-1225.e1-6.
- Leiter, M., Harvie, P., & Frizzell, C. (1998). The correspondence of patient satisfaction and nurse burnout. *Social Science & Medicine*, 47, 1611-1617.
- Levinson, W., Roter, D.L., Mullooly, J.P., Dull, V.T., & Frankel, R.M. (1997). Physician-patient communication: The relationship with malpractice claims among primary care physicians and surgeons. *Journal of the American Medical Association*, 277(7),553-559.
- Lievrouw, A., Vanheule, S., Deveugele, M., Vos, M., Pattyn, P., Belle, V., & Benoit, D.D. (2016). Coping with moral distress in oncology practice: Nurse and physician strategies. *Oncology Nursing Forum*, 43(4),505-12.
- Lilly, C. M., De Meo, D. L., Sonna, L. A., Haley, K. J., Massaro, A. F., Wallace, R. F., & Cody, S. (2000). An intensive communication intervention for the critically ill. *American Journal of Medicine*, 109(6), 469-475.

- Lützn, K., Cronqvist, A., Magnusson, A., & Andersson, L. (2003). Moral stress: synthesis of a concept. *Nursing Ethics*, 10, 312–22.
- Malloy, D.C., Hadjistavropoulos, T., McCarthy, E.F., Evans, R.J., Zakus, D.H., Park, I., Lee, Y., & Williams, J. (2009). Culture and organizational climate: nurses' insights into their relationship with physicians. *Nursing Ethics*, 16(6),719-33.
- Mannino, G., Falgares, G., & Di Maria, F. (2002). Oltre il principio del piacere: I processi per la costruzione del benessere individuale e sociale a partire dal modello ermeneutico delle relazioni s/oggettuali. In F. Di Maria, (Eds.), *Psicologia del benessere sociale*. Milano: Mc Graw Hill.
- Marin, M.J., Storniolo, L.V. & Moravcik, M.Y. (2010). Humanization of care from the perspective of the family health strategy teams in a city in the interior of São Paulo, Brazil. *Revista Latino-Americana de Enfermagem*, 18(4),763-9.
- Maslach, C. (1982). *Burnout: The Cost of Caring*. Englewood Cliffs, NJ: Prentice Hall.
- Maslach, C., & Leiter, M. (1997). *The truth about burnout: How organizations cause personal stress and what to do about it*. San Francisco: Jossey-Bass.
- Mason, V.M., Leslie, G., Clark, K., Lyons, P., Walke, E., Butler, C., & Griffin, M. (2014) Compassion fatigue, moral distress, and work engagement in surgical Intensive Care Unit trauma nurses: A pilot study. *Dimensions of Critical Care Nursing*, 33(4), 215-225.
- Mauri, E., Vegni, E., Lozza, E., Parker, P.A., & Moja, E.A. (2009). An exploratory study on the Italian patients' preferences regarding how they would like to be told about their cancer. *Supportive Care in Cancer*, 17(12), 1523-1530.
- McAndrew, N.S., Leske, J.S., & Garcia, A. (2011). Influence of moral distress on the professional practice environment during prognostic conflict in critical care. *Journal of Trauma Nursing*, 18(4), 221-230.
- McCarthy, J., & Deady, R. (2008). Moral distress reconsidered. *Nursing Ethics*, 15, 254-262.
- McCarthy, J., & Gastmans, C. (2015). Moral distress: a review of the argument-based nursing ethics literature. *Nursing Ethics*, 22, 131-152.
- Meadors, P., & Lamson, A. (2008). Compassion fatigue and secondary traumatization: provider self-care on intensive care units for children. *Journal of Pediatric Health Care*, 22(1),24-34.
- Mealer, M.L., Shelton, A., Berg, B., Rothbaum, B., & Moss, M. (2007). Increased prevalence of post-traumatic stress disorder symptoms in critical care nurses. *American Journal of Respiratory Critical Care Medicine*,175(7),693-7.
- Meier, D.E., Back, A.L., & Morrison, R.S. (2001). The inner life of physicians and care of the seriously ill. *The Journal of the American Medical Association*, 286,3007-14.

- Meltzer, L., & Huckabay, L. (2004). Critical care nurses' perceptions of futile care and its effect on burnout. *American Journal of Critical Care*, 13, 202–208.
- Messick, S. (1995). Standards of validity and the validity of standards in performance assessment. *Educational Measurements: Issues and Practice*, 14, 5–8.
- Meterko, M., Mohr, D., C., & Young, G., J. (2004). Teamwork culture and patient satisfaction in hospitals. *Medical Care*, 42, 492-498.
- Meyer, E. C., Burns, J. P., Griffith, J. L., & Truog, R. D. (2002). Parental perspectives on end-of-life care in the pediatric intensive care unit. *Critical Care Medicine*, 30(1), 226-231.
- Mitton, C., Peacock, S., Storch, J., Smith, N., & Cornelissen, E. (2010). Moral distress among healthcare managers: conditions, consequences and potential responses. *Healthcare Policy*, 6(2), 99.
- model of burnout. *Journal of Applied Psychology*, 86 , 499–512.
- Molazem, Z., Tavakol, N., Sharif, F., Keshavarzi, S., & Ghadakpour, S. (2013) Effect of education based on the “4A Model” on the Iranian nurses’ moral distress in CCU wards. *Journal of Medical Ethics and History of Medicine*, 6, 6-5.
- Moss, M., Good, V.S., Gozal, D., Kleinpell, R., & Sessler, C.N. (2016). An official critical care societies collaborative statement - burnout syndrome in critical care healthcare professionals: a call for action. *Chest*,150(1),17-26.
- Musto, L., Rodney, P. A., & Vanderheide, R. (2015). Moving toward interventions to address moral distress: navigating the reciprocity of structure and agency. *Nursing Ethics*, 22, 91–102.
- Muthèn, L.K., & Muthèn, B.O. (2012). *MPlus*. Los Angeles: Muthèn & Muthèn.
- Nathaniel, A. (2012). Moral distress. In J. Fitzpatrick & M, Kazer (Eds.), *Encyclopedia of Nursing Research*, New York: Springer.
- National Institute for Health and Clinical Excellence (Third edition, 2012). Methods for the development of NICE public health guidance. Available at: <http://www.nice.org.uk/article/pmg4/chapter/About-this-document> (accessed 1 May 2015)
- Nelson, J. E., Meier, D. E., Oei, E. J., Nierman, D. M., Senzel, R. S., Manfredi, P. L., Davis, S.M., & Morrison, R.S.(2001). Self-reported symptom experience of critically ill cancer patients receiving intensive care. *Critical Care Medicine*, 29, 277–282.
- Netterstrom, B., Conrad, N., Bech,P., Fink,P., Olsen,O., Rugulies, R., & Stansfeld, S. (2008). The relation between work-related psychosocial factors and the development of depression. *Epidemiologic Reviews*, 30, 118–132.
- Nuttgens, S., & Chang, J. (2013). Moral distress within the supervisory relationship: implications for practice and research. *Counselor Education and Supervision*, 52(4), 284-296.

- October, T., Hinds, P., Wang, J., Dizon, Z., Cheng, Y., & Roter, D. (2016). Parent satisfaction with communication is associated with physician's patient-centered communication patterns during family conferences. *Pediatric Critical Care Medicine*, 17(6), 490-497.
- Ohaeri, J. U. (2003). The burden of caregiving in families with a mental illness: A review of 2002. *Current Opinion in Psychiatry*, 16, 457-465.
- Ohnishi, K., Ohgushi, Y., Nakano, M., Fujii, H., Tanaka, H., Kitaoka, K., Nakahara, J., & Narita, Y. (2010.) Moral distress experienced by psychiatric nurses in Japan. *Nursing Ethics*, 17(6), 726-740.
- Olson, L.L. (1998). Hospital nurses' perceptions of the ethical climate of their work setting. *Image Journal of Nursing Scholarship*. 30:345-349.
- Ostroff, C., & Judge, T. A. (Eds.). (2007). *Perspectives on organizational fit*. New York: Psychology Press.
- Pagnamenta, A., Bruno, R., Gemperli, A., Chiesa, A., Previsdomini, M., Corti, F., Merlani, P., Cottini, S., Llamas, M., & Rothen, H. U. (2016). Impact of a communication strategy on family satisfaction in the intensive care unit. *Acta Anaesthesiologica Scandinavica*, 60, 800-809.
- Papathanassoglou, E. D., Karanikola, M. N., Kalafati, M., Giannakopoulou, M., Lemonidou, C., & Albarran, J. W. (2012). Professional autonomy, collaboration with physicians, and moral distress among European intensive care nurses. *American Journal of Critical Care*, 21, 41-52.
- Pauly B, Varcoe C, Storch J and Newton L (2009) Registered nurses' perceptions of moral distress and ethical climate. *Nursing Ethics*, 16(5): 561-573.
- Peter, E., & Liaschenko, J. (2004). Perils of proximity: a spatiotemporal analysis of moral distress and moral ambiguity. *Nursing Inquiry*, 11, 218-225.
- Petticrew, M., & Roberts, H. (2006). *Systematic reviews in the social sciences: a practical guide*. Malden, MA: Blackwell Publishing.
- Piers, R.D., Van Den Eynde, M., Steeman, E., Vlerick, P., Benoit, D.D., & Van Den Noortgate, N.J. (2012). End-of-life care of the geriatric patient and nurses' moral distress. *Journal of the American Medical Directors Association*, 13(1): 80-e7.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879.
- Prentice, T., Janvier, A., Gillam, L., & Davis, P. G. (2016). Moral distress within neonatal and paediatric intensive care units: a systematic review. *Archives of Disease in Childhood*. Advance online publication. doi:10.1136/archdischild-2015-309410.

- Prottas DJ (2013) Relationships among employee perception of their manager's behavioral integrity, moral distress, and employee attitudes and well-being. *Journal of Business Ethics*, 113(1): 51-60.
- Pulkki-Råback, L., Elovainio, M., Virtanen, M., Kivimäki, M., Hintsanen, M., Hintsanen, T., Jokela, M., Puttonen, S., Joensuu, M., Lipsanen, J., Raitakari, O.T. & Keltikangas-Järvinen, L. (2016). Job demands and job control as predictors of depressive symptoms: Moderating effects of negative childhood socioemotional experiences. *Stress and Health*, 32,383-394.
- Puntillo, K. A., & McAdam, J. L. (2006). Communication between physicians and nurses as a target for improving end-of-life care in the intensive care unit: Challenges and opportunities for moving forward. *Critical Care Medicine*, 34(11 Suppl), S332-40.
- Quiñones-Vidal E, Lozpez-García JJ, Peñaranda-Ortega M and Tortosa-Gil F (2004) The nature of social and personality psychology as reflected in JPSP, 1965-2000. *Journal of Personality and Social Psychology*, 86(3): 435.
- Rice, E. M., Rady, M. Y., Hamrick, A., Verheijde, J. L., & Pendergast, D. K. (2008). Determinants of moral distress in medical and surgical nurses at an adult acute tertiary care hospital. *Journal of Nursing Management*, 16, 360-373.
- Risch, N., Herrell, R., Lehner, T., Liang, K. Y., Eaves, L., Hoh, J., Griem, A., Kovacs, M., Ott, J., & Merikangas, K. R. (2009). Interaction between the serotonin transporter gene (5-HTTLPR), stressful life events, and risk of depression: a meta-analysis. *Journal of the American Medical Association*, 301, 2462-2471.
- Rizzo, J., House, R. J., & Lirtzman, S. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly*, 15, 150-163.
- Rokeach, M. (1968). *Beliefs, attitudes, and values: A theory of organization and change*. San Francisco: Jossey-Bass.
- Rushton, C. (2016). Moral resilience: A capacity for navigating moral distress in critical care. *AACN Advanced Critical Care*, 27(1), 111-119.
- Rushton, C.H. (2006). Defining and addressing moral distress: tools for critical care nursing leaders. *AACN Advanced Critical Care*, 17(2),161-8.
- Rushton, C.H., Kaszniak, A,W., & Halifax, J.S. (2013). Addressing moral distress: Application of a framework to palliative care practice. *Journal of Palliative Medicine*, 16(9), 1080-1088.
- Sacco, R., Santangelo, G., Stamenova, S., Bisecco, A., Bonavita, S., Lavorgna, L., Trojano, L., D'Ambrosio, A., Tedeschi, G., & Gallo, A. (2016). Psychometric properties and validity of Beck Depression Inventory II in multiple sclerosis. *European Journal of Neurology*, 23, 744–750.



- Salins, N., Deodhar, J., & Muckaden, M. (2016). Intensive Care Unit death and factors influencing family satisfaction of Intensive Care Unit care. *Indian Journal of Critical Care Medicine*, 20(2), 97-103.
- Sasso, L., Bagnasco, A., Bianchi, M., Bressan, V., & Carnevale, F. (2016). Moral distress in undergraduate nursing students: A systematic review. *Nursing Ethics*, 23(5),523-34.
- Sauerland, J., Marotta, K., Peinemann, M. A., Berndt, A., & Robichaux, C. (2014). Assessing and addressing moral distress and ethical climate, Part 1. *Dimensions of Critical Care Nursing*, 33, 234-245.
- Schluter, J. Winch, S., Holzhauser, K., & Henderson, A. (2008) Nurses' moral sensitivity and hospital ethical climate: A literature review. *Nursing Ethics*, 15(3), 304-321.
- Schoenfelder, T., Klewer, J., & Kugler, J. (2011). Determinants of patient satisfaction: a study among 39 hospitals in an in-patient setting in Germany. *International Journal for Quality in Healthcare*, 23(5), 503-509.
- Schwenzer, K. J., & Wang, L. (2006). Assessing moral distress in respiratory care practitioners. *Critical Care Medicine*, 34(12), 2967-2973.
- Selye, H. (1974). *Stress without distress*, Philadelphia, NY: Lippincott Company.
- Shepard, A. (2010). Moral distress: A consequence of caring. *Clinical Journal of Oncology Nursing*, 14(1), 25-27.
- Silén, M., Svantesson, M., Kjellström, S., Sidenvall, B., & Christensson, L. (2011). Moral distress and ethical climate in a Swedish nursing context: perceptions and instrument usability. *Journal of Clinical Nursing*, 20(23-24), 3483-3493.
- Smith, P.M., Frank, J.W., Mustard, C.A., & Bondy, S.J. (2008). Examining the relationships between job control and health status: a path analysis approach. *Journal of Epidemiology and Community Health*, 62(1), 54-61.
- Soleimani, M.A., Sharif, S.P., Yaghoobzadeh, A., & Panarello, B. (2016). Psychometric evaluation of the Moral Distress Scale-Revised among Iranian Nurses. *Nursing Ethics*. Advance online publication. pii: 0969733016651129.
- Solum, L. & Schaffer, M. (2003). Ethical problems experienced by school nurses. *The Journal of School Nursing*, 19, 6,330-337.
- Sporrong, S.K., Höglund, A.T., & Arnetz, B. (2006). Measuring moral distress in pharmacy and clinical practice. *Nursing Ethics*, 13(4),416-427.
- Steiger, J. H. (1990). Structural model evaluation and modification: an interval estimation approach. *Multivariate Behavioral Research*, 25, 173-180.

- Sundin-Huard, D., & Fahy, K. (1995). Moral distress, advocacy and burnout: theorizing the relationships. *International Journal of Nursing Practice*, 5(1), 8-13.
- Surbone, A. (2008). Information to cancer patients: Ready for new challenges? *Supportive Care in Cancer*, 16, 865–868.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's Alpha. *International Journal of Medical Education*, 2,53-55.
- Thomsen, S., Soares, J., Nolan, P., Dallender, J., & Arnetz, B. (1999). Feeling of professional fulfilment and exhaustion in mental health personnel: the importance of organizational and individual factors. *Psychotherapy and Psychosomatics*, 68, 157–164.
- Truog, R.D., Brown, S.D., Browning, D., Hundert, E.M., Rider, E.A., Bell, S.K., & Meyer, E.C. (2015). Microethics: the ethics of everyday clinical practice. *The Hastings Center Reports*, 45(1),11-7.
- Tully, A. (2004). Stress, sources of stress and ways of coping among psychiatric nursing students. *Journal of Psychiatric and Mental Health Nursing*, 11(1), 43-47.
- van der Heide, A., Deliens, L., Faisst, K., Nilstun, T., Norup, M., Paci, E., van der Wal, G., & van der Maas, P.J. (2003). End-of-life decision-making in six European countries: descriptive study. *The Lancet*, 361(2), 345-350.
- Varcoe, C., Pauly, B., & Webster, G. (2012). Moral distress: tensions as springboards for action. *HEC Forum*, 24, 51-62.
- Vince, T., & Petros, A. (2006). Should children's autonomy be respected by telling them of their imminent death? *Journal of Medical Ethics*, 32, 21–23.
- Viney, C. A. (1996). A phenomenological study of ethical decision-making experiences among senior intensive care nurses and doctors concerning withdrawal of treatment. *Nursing in Critical Care*, 1,182-87.
- Wall, R. J., Engelberg, R. A., Downey, L., Heyland, D. K., & Curtis, J. R. (2007). Refinement, scoring, and validation of the Family Satisfaction in the Intensive Care Unit (FS-ICU) survey. *Critical Care Medicine*, 35, 271-279
- Wallace, J. E., Lemaire, J. B., & Ghali, W. A. (2009). Physician wellness: a missing quality indicator. *The Lancet*, 374, 1714-1721.
- Webster, G., & Bayliss, F. (2000). Moral residue. In S. Rubin & L. Zoloth (Eds.), *Margin of error: The ethics of mistakes in the practice of medicine*. Hagerstown, MD: University Publishing Group, Inc
- Weinberg, A., & Creed, F. (2000). Stress and psychiatric disorder in healthcare professionals and hospital staff. *Lancet*, 355, 533–537.

- Wiggleton, C., Petrusa, E., Loomis, K., Tarpley, J., Tarpley, M., O'Gorman, M.L., & Miller, B. (2010). Medical students' experiences of moral distress: development of a web-based survey. *Academic Medicine*, 85(1), 111-117.
- Wilkinson, J. M. (1988). Moral distress in nursing practice: experience and effect. *Nursing Forum*, 23, 16-29.
- Wilkinson, J.M. (1989). Moral distress: a labor and delivery nurse's experience. *Journal of Obstetric Gynecologic and Neonatal Nursing*, 18(6),513-9.
- Williams, B., Brown, T., & Onsmann, A. (2010). Exploratory factor analysis: A five-step guide for novices. *Journal of Emergency Primary Health Care*, 8, 1-13.
- Williams, S., Weinman, J., & Dale, J. (1998). Doctor-patient communication and patient satisfaction: a review. *Family Practice*, 15, 480-492.
- Willmott, L., White, B., Gallois, C., Parker, M., Graves, N., Winch, S., Callaway, L.K., Shepherd, N., & Close, E. (2016). Reasons doctors provide futile treatment at the end of life: a qualitative study. *Journal of Medical Ethics*. Advance online publication. doi:10.1136/medethics-2016-103370
- Wocial, L.D., & Weaver, M.T. (2013). Development and psychometric testing of a new tool for detecting moral distress: The Moral Distress Thermometer. *Journal of Advanced Nursing*, 69(1), 167-174.
- World Health Organization. (2010). *Process of translation and adaptation of instruments*. Retrieved from: [http://www.who.int/substance\\_abuse/research\\_tools/translation/en/](http://www.who.int/substance_abuse/research_tools/translation/en/).
- Yu, C.Y. (2002). *Evaluating cutoff criteria of model fit indices for latent variable models with Binary and Continuous Outcomes*. PhD dissertation, University of California: Los Angeles.
- Zapf, D. (2002). Emotion work and psychological well-being. A review of the literature and some conceptual considerations. *Human Resource Management Review*, 12, 237-268.
- Zuzelo, P.R. (2007) Exploring the moral distress of registered nurses. *Nursing Ethics*, 14(3), 344-359.

## ACKNOWLEDGMENTS

*Thanks to Professor Piergiorgio Argentero for believing in my potential and supervising my work during the PhD program, thanks to Professor Elena Vegni for her input and suggestions during these years, and thanks to Professor Gaetano Iapichino for his support with clinicians' recruitment.*

*Thanks to Ilaria Setti, Paola Dordoni and Luca Barlascini for their patient help with the statistical analysis. Working with them has been a pleasure and a source of learning.*

*Thanks to Lorenzo Giusti, Rosalba Lamberti, Matteo Ciconali and Michela Ordanini for their precious assistance in the data collection and data entry.*

*Thanks to all the physicians, nurses, residents and patients who believed in this project and made their experiences and professional practice available for research purposes.*

*Thanks to my parents and sisters. I would not be the person I am now without them.*

*Thanks to Giovanni for his unconditional support and patience, and thanks to Eugenia for the infinite joy she brought to my life and for reminding me, with her presence, what are the most important things in life.*

## APPENDIX 1. Moral Distress Scale-Revised (Hamric et al., 2012)

Moral distress occurs when professionals cannot carry out what they believe to be ethically appropriate actions because of internal or external constraints. The following situations occur in clinical practice. If you have experienced these situations they may or may not have been morally distressing to you. Please indicate how frequently you experience each item described and how disturbing the experience is for you. If you have never experienced a particular situation, select “0” (never) for frequency. Even if you have not experienced a situation, please indicate how disturbed you would be if it occurred in your practice. Note that you will respond to each item by checking the appropriate column for two dimensions: *Frequency* and *Level of Disturbance*.

	Frequency					Level of Disturbance				
	Never		Very Frequently			None		Great Extent		
	0	1	2	3	4	0	1	2	3	4
1. Provide less than optimal care due to pressures from administrators or insurers to reduce costs.										
2. Witness healthcare providers giving “false hope” to the patient or family.										
3. Follow the family’s wishes to continue life support even though I believe it is not in the best interest of the patient.										
4. Initiate extensive life-saving actions when I think they only prolong death.										
5. Follow the family’s request not to discuss death with a dying patient who asks about dying.										
6. Feel pressure from others to order what I consider to be unnecessary tests and treatments.										
7. Continue to participate in care for a hopelessly ill person who is being sustained on a ventilator, when no one will make a decision to withdraw support.										
8. Avoid taking action when I learn that a physician or nurse colleague has made a medical error and does not report it.										
9. Assist another physician who in my opinion is providing incompetent care.										
10. Be required to care for patients I don’t feel qualified to care for.										
11. Let medical students perform painful procedures on patients solely to increase their skill.										
12. Provide care that does not relieve the patient’s suffering because I fear that increasing the dose of pain medication will cause death.										
13. Request nurses or others not to discuss the patient’s prognosis with the patient or family.										

	Frequency					Level of Disturbance				
	Never		Very Frequently			None		Great Extent		
	0	1	2	3	4	0	1	2	3	4
14. Increase the dose of sedatives/opiates for an unconscious patient that I believe could hasten the patient's death.										
15. Take no action about an observed ethical issue because the involved staff member or someone in a position of authority requested that I do nothing.										
16. Follow the family's wishes of the patient's care when I do not agree with them, but do so because of fears of a lawsuit.										
17. Work with nurses or other healthcare providers who are not as competent as the patient care requires.										
18. Witness diminished patient care quality due to poor team communication.										
19. Ignore situations in which patients have not been given adequate information to insure informed consent.										
20. Watch patient care suffer because of a lack of provider continuity.										
21. Work with levels of nurse or other care provider staffing that I consider unsafe.										
If there are other situations in which you have felt moral distress, please write them and score them here:										

Have you ever left or considered quitting a clinical position because of your moral distress with the way patient care was handled at your institution?

- No, I've never considered quitting or left a position
- Yes, I considered quitting but did not leave
- Yes, I left a position

Are you considering leaving your position now? Yes          No

## APPENDIX 2. Italian Moral Distress Scale-Revised

Il **disagio etico**, in inglese “*moral distress*”, viene sperimentato **quando l’operatore sanitario non può mettere in atto un comportamento che ritiene eticamente corretto**. Di seguito troverà riportate alcune situazioni che possono accadere nella pratica clinica. Per favore, **indichi quanto frequentemente le sono capitate e quanto le creano disagio**. Se una situazione non le è mai capitata metta una crocetta sotto lo “0” (=mai) nella colonna della Frequenza. Anche se una situazione non le fosse mai capitata, per favore indichi quanto la disturberebbe qualora le dovesse accadere. Per favore risponda a ogni situazione mettendo una crocetta per entrambe le dimensioni: Frequenza e Disagio.

	Frequenza					Disagio				
	Mai		Molto Spesso			Nessuno		Molto		
	0	1	2	3	4	0	1	2	3	4
1. Vedere professionisti che danno al paziente o ai famigliari “false speranze”.										
2. Assecondare il desiderio dei famigliari di continuare le cure salva vita anche se ritengo ciò non sia nel miglior interesse del paziente.										
3. Avviare azioni salva vita ad ampio spettro quando ritengo che possano soltanto prolungare la morte.										
4. Assecondare il desiderio dei famigliari di non discutere della morte imminente con un paziente terminale che ne fa richiesta.										
5. Sentirsi pressato da altri a prescrivere esami e cure che non ritengo necessari.										
6. Continuare a curare un paziente terminale, dipendente dal punto di vista ventilatorio, quando so che nessuno prenderà la decisione di sospendere le cure.										
7. Non fare niente pur sapendo che un medico o un infermiere ha commesso un errore e non lo ha riferito.										
8. Lavorare con un medico o un infermiere che a mio parere non è competente.										
9. Aumentare la dose di farmaci sedativi/oppiacei che credo possa accelerare il decesso di un paziente in coma.										
10. Non intervenire in una problematica etica perché i colleghi coinvolti o qualche responsabile vi hanno chiesto di non fare nulla.										
11. Assecondare i desideri dei famigliari rispetto all'assistenza del paziente, anche se non sono d'accordo, per timore di un'azione legale.										
12. Vedere che le cure al paziente risentono a causa della mancanza di continuità assistenziale.										
13. Assistere a una diminuzione della qualità delle cure a causa di una scarsa comunicazione tra colleghi.										
14. Ignorare situazioni in cui ai pazienti non sono state fornite informazioni adeguate per assicurarne il consenso informato.										

Ha mai pensato di lasciare la sua posizione lavorativa a causa del disagio etico sperimentato nel suo ambiente di lavoro?

- No, non ho mai pensato di lasciare la mia posizione  
 Sì, ho pensato di lasciare la mia posizione ma non l’ho fatto  
 Sì, ho già lasciato precedentemente una posizione

Attualmente sta pensando di lasciare la sua posizione lavorativa?    Sì                      No