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Medical students' experiences of moral distress – a cross-sectional observational, web-based multicentre study

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MEDICAL STUDENTS' EXPERIENCES OF MORAL DISTRESS – A CROSS-SECTIONAL OBSERVATIONAL, WEB-BASED MULTICENTRE STUDY

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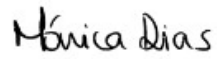
Maio de 2020



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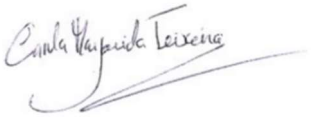

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RESUMO

Introdução: O sofrimento moral ocorre quando um profissional de saúde sabe qual a ação moralmente correta a adotar, mas está constrangido de alguma forma de adotar essa ação. Os estudantes de medicina podem experienciar situações moralmente desafiantes devido à sua baixa posição na hierarquia hospitalar.

Objetivo: Explorar a frequência e intensidade do sofrimento moral entre os alunos de medicina de sete escolas médicas Portuguesas.

Métodos: Este foi um estudo multifásico, multicêntrico e transversal. Primeiro, traduzimos e adaptámos culturalmente a medida "Measure of Moral Distress – Healthcare Professionals (MMD-HP)" para Português, seguindo o protocolo internacionalmente aceite "COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN)", garantindo que era adequado para estudantes de medicina. De seguida, elaborámos um questionário online, seguindo as guidelines "Checklist for Reporting Results of Internet E-Surveys (CHERRIES)". Os alunos das sete escolas médicas Portuguesas incluídas no estudo foram solicitados a pontuar 27 situações potencialmente causadores da sofrimento moral em duas dimensões: frequência e intensidade, ambas numa escala numérica de 5 valores em que 0 representa ausência de sofrimento. O questionário incluía também 5 questões de escolha múltipla relacionadas com o tema e questões sociodemográficas. O consentimento livre e informado foi obtido por cada potencial participante clicando num quadrado junto a uma declaração que informava os objetivos do estudo e explicitava o seu direito de desistir a qualquer momento sem qualquer consequência. O estudo foi aprovado por todas as comissões de ética das sete escolas médicas incluídas neste trabalho.

Resultados: De aproximadamente 4300 estudantes, 939 (22%) completaram o questionário. As sete escolas médicas incluídas no estudo estavam representadas na amostra. Os estudantes tinham experienciado, em média, 16 situações causadoras de sofrimento moral. A mediana do score composto de sofrimento moral foi 79 (IQR 44-118). Entre as situações mais frequentes e causadoras de sofrimento mais intenso, registaram-se causas ao nível do paciente, da equipa e do sistema. Apenas 32% dos estudantes se sentem bem ou muito bem preparados para lidar com situações causadoras de sofrimento moral. De todos os participantes, 26% já consideraram deixar o curso de medicina e 28% já pensaram escolher uma especialidade não clínica devido ao sofrimento moral.

Conclusões: Os nossos dados sugerem que o sofrimento moral é um fenómeno comum entre os alunos de medicina e a sua experiência mostra um efeito cumulativo ao longo do tempo. As escolas médicas poderiam adaptar os seus currículos de forma a abordar este fenómeno e mitigar os seus efeitos desde os primeiros anos clínicos da educação médica.

PALAVRAS-CHAVE: sofrimento moral; educação médica; estudantes de medicina; escolas médicas; medição

ABSTRACT

Introduction: Moral distress occurs when a health care professional knows the morally correct action to take but is constrained in some way from taking that action. Medical students may experience morally challenging situations due to their low position in the hospital hierarchy.

Objective: To explore the frequency and intensity of moral distress occurring among medical students in seven of the eight Portuguese medical schools.

Methods: This was a multi-phase, multi-centre, cross-sectional study. First, we translated and culturally adapted the "Measure of Moral Distress – Healthcare Professionals (MMD-HP)" into Portuguese, following the internationally accepted "COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN)", insuring it was suitable for medical students to use. Then, we conducted a web-based survey, following the "Checklist for Reporting Results of Internet E-Surveys (CHERRIES)" guidelines. Students from the seven Portuguese medical schools included in the study were asked to rate 27 potentially morally distressing situations on two dimensions: frequency and intensity, both in a 5 numeric rating scale with 0 representing no distress. The survey also included 5 multiple choice questions related to the topic and sociodemographic items. Free, informed consent was obtained by each potential participant in the form of clicking a square next to the statement declaring the aim of the study, which also included their right to withdrawal at any point with no consequences. The study was approved by all seven medical schools' ethics committees included in this work.

Results: Of approximately 4300 medical students, 939 (22%) completed the survey. There were participants from seven out of eight Portuguese medical schools. Students had experienced, on average, 16 morally distressing situations. Median of composite score of moral stress was 79 (IQR 44-118). System, patient and team-level root causes of moral distress were identified among the most frequent and most distressing situations. Only 32% of the students felt well or very well prepared to handle a morally distressing situation. Of the participants, 26% had considered leaving medical school and 28% of the students thought about choosing a non-clinical specialty due to moral distress.

Conclusions: Our data suggests moral distress is a common phenomenon among medical students and its experience shows a cumulative effect over time. Medical schools might adapt their curricula in order to address this phenomenon and mitigate its effects as early as first clinical years of medical education.

KEYWORDS: moral distress; medical education; medical students; medical schools; measurement

LIST OF ABBREVIATIONS

CHERRIES - Checklist for Reporting Results of Internet E-Surveys

COSMIN - COnsensus-based Standards for the selection of health Measurement Instruments

FMUP – Faculdade de Medicina da Universidade do Porto

FMUL – Faculdade de Medicina da Universidade de Lisboa

FMUC – Faculdade de Medicina da Universidade de Coimbra

ICBAS – Instituto de Ciências Biomédicas Abel Salazar

IQR – Interquartile Range

MDS-R - Moral Distress Scale-Revised

MMD-HP - Measure of Moral Distress – Healthcare Professionals

NMS|FCM – Nova Medical School | Faculdade de Ciências Médicas

UBI – Universidade da Beira Interior

U. Minho – Universidade do Minho

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INTRODUCTION

Medicine has undergone many changes over time and doctor-patient relationship has gained relevance as one of the main subjects in medical discussions[1]. This relationship requires a moral conduct from the physician to deal with moral issues and to do the right choices considering all circumstances[2,3]. Many aspects of our lives influence the way we define an ethical clinical practice, namely religions, philosophies and cultures[1]. The physician's oath (nowadays adapted from the original Oath of Hippocrates) taken by most physicians upon graduation from medical school aims to regulate the conduct of medical profession as an ethical code, considering that a physician must recognize responsibility towards patients, society and themselves[4-7].

When physicians take the medical oath they swear to practice their profession with conscience and dignity; they will not permit any discrimination to intervene between their duty and their patients; they will always respect human life and they will not use medical knowledge to violate human rights and civil liberties, even under threat[8].

Other health care professionals[2,9], responsible to provide their patients with quality care, are equally confronted with many ethical dilemmas in their practice and that is the reason why codes of ethics[10] have been adopted for many professions[9].

Codes of ethics help healthcare professionals to deal with situations when they find barriers preventing them from fulfilling their duties, supporting them in their practice and reducing their moral distress[9].

Moral distress started to be described among nursing practice as a situation that occurs when a health care professional knows the morally correct action to take but is constrained in some way from taking that action[11]. This definition has been changed since then. The same author noticed that moral distress is different from the moral dilemma, since in the first one the professional knows the morally right course of action to take, in contrast to the moral dilemma in which all the alternatives of action are perceived as a value conflict source[12].

Currently, a broader approach of moral distress has been adopted and can be described as a psychological response to morally challenging situations, including moral conflict, dilemma, or uncertainty[13]. Moral distress root causes can occur at patient, team or system levels[14].

Moral distress is frequent among healthcare professionals and may contribute to many undesirable effects, including burnout, decrease of wellbeing, lack of empathy and, ultimately, decrease of

quality of care[15]. There is evidence that among healthcare professionals, those with longer clinical experience[16], face the "crescendo effect" phenomenon meaning, they have higher levels of moral distress due to the negative effects which have built over time.

Medical students are not usually included in studies concerning moral distress in healthcare professionals, but they may experience morally challenging situations and some recent studies show just that[17,18]. However, moral distress is not widely recognized by medical educators, which may overwhelm medical schools' efforts to advance student's levels of empathy, and contribute to the persistent lack of efficacy of ethics and humanities curricula[19].

The first questionnaire designed with the intention to measure moral distress was introduced in 2001[20] with 38 items. Later, revised, a 21 item scale was developed, the Moral Distress Scale-Revised (MDS-R)[21], applicable to all heath care professionals and used by most recent studies concerning the moral distress issue among nurses, physicians[22] and in different clinical contexts, such as paediatrics[23] and intensive care units[24,25]. In a recent revision[14] of the "Measure of Moral Distress – Healthcare Professionals (MMD-HP)" authors recommend to replace the MSD-R as a measure for moral distress among healthcare professionals in order to include more sources of moral distress and simplify its use[14].

The aims of this study are to translate and culturally adapt the "Measure of Moral Distress – Healthcare Professionals (MMD-HP)" questionnaire[14]; to collect additional relevant data using other questions; and to explore the frequency and intensity of moral distress occurring among medical students in seven participating Portuguese medical schools.

METHODS

Study design and participants

An observational, cross-sectional, multi-centre study was conducted in fourth, fifth and sixth-years medical students using a web-based survey, as per the Checklist for Reporting Results of Internet E-Surveys (CHERRIES Checklist)[26]. These academic years were chosen because they represent years of clinical practice in university hospitals in Portugal. The study was approved by all seven medical schools' ethics committees included in this work.

Measures used

The questionnaire used in the study was based on the "Measure of Moral Distress – Healthcare Professionals (MMD-HP)"[14]. Following the Consensus-based Standards for the selection of health Measurement Instruments (COSMIN) Checklist[27], the guidelines and principles of good practice for this process[28,29] the original questionnaire was linguistically translated and culturally adapted to the context of Portuguese health care.

The author of MDS-R[21], Dr Hamric was contacted and recommended the use of the MMD-HP version[14] and gave permission to use the instrument.

Translation, back translation and consensus version

Initial translation of MMD-HP from English into Portuguese was made by three translators with different profiles: a clinical doctor and an investigator with end-of-life care and bioethics experience, both with good knowledge and aware of the concepts used in this context, which helped to provide equivalency from a clinical perspective; the third one, a certified English teacher, with no experience in the subject and without a clinical background, able to focus on the different meanings between the two languages. Translators were also able to register their comments about uncertainties or explanations about their choices in addition to the translation.

Then, the three translated versions were compared with the original questionnaire by the authors of this study in order to evaluate the differences and to achieve consensus to create a final common version after discussing and solving each issue.

The next step was the back translation, that is, the translated Portuguese version was translated back into English in order to check the validity and to ensure content equivalence between the translated and original version. It was performed by two clinical doctors and a nurse with end-of-life care experience, all of them completely blind to the original version and fluent in English.

The three back-translated versions were then compared with each other and with the original version by the authors of this study in order to identify, discuss the differences and the need for translated revisions to achieve a prefinal version.

The final Portuguese version of the questionnaire and the cultural adaptions were later discussed in a focus group. The focus group was comprised of 7 medical students from different academic years (2 from the 4th year, 2 from the 5th and 3 from the 6th year), representing the target population of the study, and the first author of the present study. Each item of the questionnaire was discussed individually. The aim was to achieve consensus on the best way to formulate each item and to

ensure there were no divergent interpretations. The translators' previous comments and uncertainties were considered in the discussion.

The final questionnaire was shared online on social media in private groups where medical students from each school share medical school information and was sent by e-mail through institutional e-mail used by the medical schools. The participants were informed about the volunteer aspect of the study. There were no incentives offered to potential participants. Free, informed consent was obtained by each potential participant in the form of clicking a square next to the statement declaring the aim of the study, which also included their right to withdrawal at any point with no consequences. The questionnaire had 38 items sequentially presented – each participant was able to scroll down and scroll up through the questions. All items were mandatory. The questionnaire could only be submitted if all items were answered (except for the free text items asking if there were any potential distress situations they would like to add or any comments they would like to make). Data were collected over 4 weeks, between 06/03/2020 and 03/04/2020.

Analysis

Descriptive analysis was used to look at distributions of sociodemographic and categorical response data.

Analysis was performed using the two-tailed significance level set at $\alpha = 0,05$. Occurrence rates and intensity for each situation were first analysed individually and then a composite score of moral distress (the product between the frequency and intensity of each factor) was created in order to compare it with other variables.

If data related to the composite score showed a skewed right distribution, the logarithm of the variable would be used to normalize it and to perform the statistics tests. T tests were performed to compare the composite score in different groups of participants. One-way ANOVA tests were performed when more than one group were being compared at the same time. Analyses were performed using software IBM SPSS version 26.

RESULTS

Translation, back translation and consensus version

From the discussion in the focus group emerged the final Portuguese version of the questionnaire.

Consensus was achieved on the best way to formulate each item and there were no divergent interpretations.

Some decisions were taken in order to guarantee a better adaptation to the Portuguese language. For example, the word "distress" has no translation into Portuguese and is not currently used in Portuguese vocabulary, so the word was replaced by the Portuguese word for suffering ("sofrimento").

Measures used

In total, the Portuguese version questionnaire presents 27 potential distress situations. Students were asked to rate each situation on two dimensions: frequency of the described situation and intensity of resulting distress. Frequency is scored on a 5-point numeric rating scale (0 = never to 4 = very frequently) as is intensity (0 = none to 4 = very distressing). If a student had never experienced a situation described in one or more items, we still asked for them to rate the items by selecting zero regarding frequency and indicate how distressed they think they would feel if they had experienced it. There were free text boxes to allow addition of new situations.

Furthermore, we asked participants if they ever considered leaving medical school or if they are considering leaving medical school due to moral distress, if they ever considered choosing a non-clinical specialty due to moral distress and how well prepared they feel to handle a morally distressing situation. To understand the current state of training associated with this topic, we asked participants if such issues have been addressed during their medical education. One last free text item was created to allow participants to write any comments about the theme if they wished. Sociodemographic data namely age, sex, medical school and year of study were also collected.

Demographics of the population

Of approximately 4300 medical students (number of students from the 4th, 5th and 6th years attending the academic year 2019/2020 in the seven Portuguese medical schools), 939 (22%) completed the survey. As shown in table I, 79% of the participants were female (68% of the target population are female) and the median age was 23 (Interquartile range [IQR] 22-24). Of all participants, 20% were from the 4th year of medical school, 33% from the 5th and 47% from the 6th year. Figure 1 shows the gender distribution of participants by year of study. Figure 2 shows the distribution of the participants among the different medical schools. There were participants from all seven medical schools included in the study. The biggest portion of participants studied at ICBAS – University of Porto (33%).

Frequency and intensity of morally distressing situations

The questionnaire presented 27 potentially morally distressing situations. Students had experienced, on average, 16 morally distressing situations. The minimum was 0 and the maximum was 27. Most students (53%) had experienced at least 16 situations. Only 3% of them had never experienced any situation (figure 3).

The most frequent situations causing moral distress were “have excessive documentation requirements that compromise patient care” (84%), “experience compromised patient care due to lack of resources/equipment/bed capacity” (84%), “feel pressured to order or carry out orders for what I consider to be unnecessary or inappropriate tests and treatments” (75%), “watch patient care suffer because of a lack of provider continuity” (74%) and “fear retribution if I speak up” (73%).

Among situations that were experienced by the participants, the ones causing higher levels of intensity were “be unable to provide optimal care due to pressures from administrators or insurers to reduce costs”(median 3; IQR 3-4), “experience compromised patient care due to lack of resources/equipment/bed capacity” (median 3; IQR 3-4) and “work with team members who do not treat vulnerable or stigmatized patients with dignity and respect” (median 4; IQR 3-4).

Perception of factors that may lead to moral distress

Among situations that students had never experienced, they scored “be unable to provide optimal care due to pressures from administrators or insurers to reduce costs” (median 3; IQR 1-4), “continue to provide aggressive treatment for a person who is most likely to die regardless of this treatment when no one will make a decision to withdraw it” (median 3; IQR 0-4), “participate in care that causes unnecessary suffering or does not adequately relieve pain or symptoms” (median 3; IQR 0-4) and “work with team members who do not treat vulnerable or stigmatized patients with dignity and respect” (median 3; IQR 0-4) as the situations they think they would feel more distressed with if they had experienced it.

Table II presents the occurrence rates and intensity scores for each situation, including experienced and anticipated situations.

Less than 1% of respondents reported other situations of moral distress concerning situations as participate in activities that participant does not agree with, such as abortion appointments; witness a patient suffering during diagnostic procedures for lack of adequate analgesia; and work with team members who treated psychiatry patients disrespectfully, using prejudicial terms to describe mental illness.

Composite score of moral distress

The two dimensions (frequency and intensity) were studied together. The frequency score and intensity score were multiplied, generating a composite item score for each item that ranges from 0 to 16. Items that have never been experienced or are not seen as distressing do not contribute to moral distress, so they are eliminated by this score. To obtain a composite score of moral distress, the composite item scores were added together. The resulting score based on 27 items has a range of 0-432.

The composite score of moral distress was, on average, 79 (IQR 44-118).

Handling a morally distressing situation

Only 32% of respondents feel well or very well prepared to handle a morally distressing situation, 58% feel poorly prepared and 11% of the students do not feel prepared at all to deal with a morally distressing situation (figure 4). The majority, 62%, reported that such issues had never been addressed during their medical education.

Potential consequences of experiencing moral distressing situations

Of all participants, 26% had considered leaving medical school and, among these, 13% are considering leaving it now due to moral distress (figure 5). At some point during medical school, 28% of the students thought about choosing a non-clinical specialty due to moral distress.

The composite score of moral distress among students who had considered leaving medical school (median 97; IQR 58-142) was higher than in students that had never thought about leaving medical school (median 77; IQR 38-108) (p<0,001). Among students who are considering leaving medical school, the composite score of moral distress was also statistically significantly higher (median 118; IQR 92-169,5) than in students who are not considering it at the moment (median 78; IQR 41,75-115) (p<0,001).

The same happens with students who had thought about choosing a non-clinical specialty due to moral distress, presenting a higher composite score of moral distress (median 98; IQR 58-145) than students who had never considered that (median 77; IQR 38-108) (p<0,001).

Gender differences

There was no statistically significant difference (p=0,518) in composite score of moral distress among genders (female - median 80 [IQR 42-120]; male - median 77 [IQR 47,5-104]).

Year of study differences

Students from 6th year of medical school showed a statistically significantly higher score of moral distress than students from 4th (p<0,001) and 5th (p<0,001) years. There was no statistically significant difference among 4th and 5th years students (p=0,86). Median and interquartile range of each group can be consulted in table III.

Medical school differences

Some statistically significant differences in composite score of moral distress were observed between the different medical schools (table IV). The three northern medical schools (ICBAS, U. Minho and FMUP) reported lower levels of experienced moral distress when compared with the other medical schools (FMUC, FMUL and NMS|FCM). UBI medical school did not show levels statistically significantly different from other schools.

Participants who addressed this topic (38%) during their medical education do not show scores of moral distress statistically significantly different (p=0,201) from participants who had never addressed it.

DISCUSSION

One of the most interesting findings of this study was to verify that most medical students had already experienced a significant number of morally distressing situations in their clinical practice. Additionally, students in the final year reported higher levels of moral distress than students from lower years.

Frequency and intensity of morally distressing situations

Most students had experienced at least 16 situations of moral distress. At the same time, most students felt poorly prepared to deal with them.

The most frequent situations reported by participants include root causes at all levels. Among experienced situations, those which caused higher levels of intensity of moral distress were system and team-level root causes.

Although some patient-level causes are among the most frequent experienced situations, they were not reported by participants as causing high levels of moral distress. For example, the situation "feel pressured to order or carry out orders for what I consider to be unnecessary or inappropriate tests and treatments" showed this pattern. This may be explained by the students' condition of the participants. They may have witnessed patient's nature situations with other healthcare professionals, considering it frequent, but situations did not happen directly with them since they are not yet responsible for this type of medical decisions.

On the other hand, among situations that participants had never experienced, those which are expected to produce higher levels of moral distress are again system, team and patient-level root causes, supporting moral distress as a multidimensional problem with multiple causes, as long as healthcare providers are exposed to them.

Write-in items added by participants were a way to find out new root causes not captured in the instrument, but all situations reported can be included in items already taken into account by the questionnaire, such as participate in care that participant does not agree with (abortion appointments); participate in care that causes unnecessary suffering (diagnostic procedures without adequate analgesia) and work with team members who do not treat stigmatized patients with dignity and respect (treat psychiatry patients in a disrespectful way). Although participants did not fit the situations with the ones presented, new root causes were not identified in this study.

Patient-level root causes

Situations regarding futile care and inadequate pain control, namely "continue to provide aggressive treatment for a person who is most likely to die regardless of this treatment when no one will make a decision to withdraw it" and "participate in care that causes unnecessary suffering or does not adequately relieve pain or symptoms" were already identified by other studies as one

of the main causes of moral distress[30,31], reinforcing the view that moral distress often describes an ethical issue and its psychological consequences[16].

Team-level root causes

In daily clinical routine, healthcare professionals work as team more than as individuals, as well as medical students, that are usually included in teams with older physicians during their clinical rotations. Cooperation and good communication between team members are crucial to guarantee good care and avoid potentially morally distressing situations. This may be assured promoting equal participation of the different elements in the discussion of clinically challenging situations, helping to create an environment that encourages the students' willingness to speak up[17] which can help not only medical students but all healthcare professionals to address morally distressing situations.

System-level root causes

System-level root causes are frequent and cause high levels of moral distress. Our institutions, with well-defined hierarchical and bureaucratic organization models, seems to contribute to this phenomenon. Students and healthcare professionals may feel restrictions to their freedom in providing the best care to the patients, which is consistent with previous studies showing lack of autonomy as an important source of moral distress[32,33]. Therefore, creating mechanisms that allow adequate flexibility and reduction of time spent with bureaucratic processes may be an effective approach to reduce levels of moral distress and increase the quality of care[34]. At the same time, inability to provide the best care due to lack of resources is an important source of moral distress that can be prevented by improving physical conditions. May be important to encourage the participation of different healthcare providers in this discussion in order to assure all conditions and recourses to their good clinical practice.

Handling a morally distressing situation

Our data showed most students feel poorly prepared to handle morally distressing situations. Indeed, there were no differences in levels of moral distress between students who stated addressing this topic in classes, during medical school training, and those who did not. One could argue that although some schools recognize it is important to address this issue, the approaches used do not seem to have a positive or protective effect on their students. Once morally distressing situations have occurred, a moral wound may remain as a result from the violation of moral values due to constraints beyond professional's control – "moral residue"[16,35].

Potential consequences of experiencing moral distressing situations

Composite score of moral distress was significantly higher in participants who had considered and are considering leaving medical school and in participants who had thought about choosing a non-clinical specialty. This is well aligned with the current literature that shows higher MMD-HP scores for those considering leaving their position[14]. Negative consequences of medical school dropouts may be felt not only by the student, but also by society, patients, the medical profession and schools[17,36]. Dropouts constitute a direct economic loss to society, may compromise the health care and represent a loss of useful contribution for the medical profession[36]. Moreover, student dropout may be symptomatic of preventable malfunctioning in medical education[36].

Year of study differences

Our data showed that students from the sixth year of medical school experienced higher levels of moral distress than students from the fourth and fifth years, supporting the concepts of "crescendo effect"[16] and "moral residue"[16,30]. The latter contributes to a higher baseline level of distress to which subsequent situations add to the issue[19]. Consequently, the phenomenon of moral distress may have a cumulative effect over time[30].

Medical school differences

The results showing differences among different medical schools in Portugal (northern medical schools showing lower levels of moral distress) suggest that medical education is somehow different among these schools. This difference is not explained by the approach or lack of approach to the theme, so other causes should be considered. The curricula of clinical years of medical schools are very similar to each other. Ethics curricula are widespread in medical education reflecting the prevalence of ethical issues in clinical practice[37], but its content and distribution is not homogeneous across schools. The main difference observed is that in northern schools the ethics subjects are integrated in the first clinical years, while in other schools the same subjects are part of the first years of medical education. This placement alongside basic sciences represents an inverse relationship between ethical exposure and clinical exposure and could potentially cause deficits in skills that may leave students more vulnerable to the impact of the moral distress[19].

Therefore, our data seems to support that all faculties could consider create a strong ethics and humanities curricula, alongside clinical practice, including didactic programmes on normative ethics, skill-building workshops on communication or ethics rounds, increasing not only self-confidence but also willingness to speak up and engage in morally responsible actions[17,19]. Medicals

students are the next generation of physicians and physicians whose understanding skills of clinical ethics are proportional to their clinical responsibilities will be able to identify and deal with situations that commonly cause moral distress[7,19].

Addressing moral distress

Approaches to reduce moral distress should address the central sources of this phenomenon and may include strategies to help medical students to identify and use their inner resources (i.e. emotional intelligence) increasing their empowerment and self-confidence[17]. Strong mentoring can help to promote trust and open communication, should encourage students to seek out problem solving opportunities and may have a strong positive effect on the level of empathy among medical students. On the other hand, negative role models, such as clinicians who show poor communication skills, difficulties managing conflicts and avoid morally uncomfortable clinical problems, may contribute to higher levels of moral distress among students[19]. This bad role modelling is at the same time an opportunity for teaching and for learning, using them as material to discuss regularly with students, deconstructing the ethically problematic situations and engaging students in mentored problem solving, self-reflection or role play[19].

Strengths and Limitations

The participation of students from seven out of eight Portuguese medical schools included in the study allows a wide knowledge of this issue at national level.

The response rate of 22% is reasonable considering the web-based survey character of the study but can limit the generalization of the results.

The last 2 weeks of data collection period coincided with the registration of the first COVID-19 cases in Portugal. One wonders if the study had been conducted during the extraordinary circumstances of COVID-19 how results might have been different. Although in our country the healthcare system was not completely ruptured and there were enough ventilators and other medical equipment to attend to all in need, were there experiences that lead to moral distress? Maybe related to decision-making process or communication with loved ones. Teamwork under extraordinary circumstances and the need to care for patients whom healthcare provider might not feel qualified for could be sources of challenging and potential morally distressing situations. Watching non-COVID-19 patients care suffer due to the redirection of medical resources to the pandemic situation could also lead to moral distress.

All medical schools suspended their activity since the first case registered. Some medical students worked as volunteers in COVID-19 patients' hospitals when all data were already collected. Therefore, these extraordinary circumstances should not have affected the results of the study.
It would be interesting to analyse these questions among healthcare professionals who were working during this period.

CONCLUSION

Our study showed that most Portuguese medical students had already experienced morally distressing situations as early as first years of clinical practice. These experiences may promote medical school dropouts with its discussed consequences and may affect the way future healthcare professionals deal with clinical and ethical challenging situations, contributing to moral residue and crescendo effect of moral distress.

Therefore, recognition of this phenomenon by medical educators might be the first step to mitigate its effects. Medical schools' curricula might benefit from the promotion of a strong mentoring program for clinical years' students, adopting peer-to-peer learning strategies. Including ethical subjects alongside clinical ones and promoting their interaction, encouraging students to seek those potential morally distressed situations during their clinical rotations, may also be a good approach to reduce moral distress.

Future research should address the differences in the curricula adopted by different medical schools in order to assess which model will have the best effect on reducing moral distress.

Table I – Demographics of the population

Number of participants, n	939
Age, median [IQR]	23 [22-24]
Gender, n (%)	
Female	739 (79)
Male	200 (21)
Year of study, n (%)	
4th	186 (20)
5th	308 (33)
6th	445 (47)

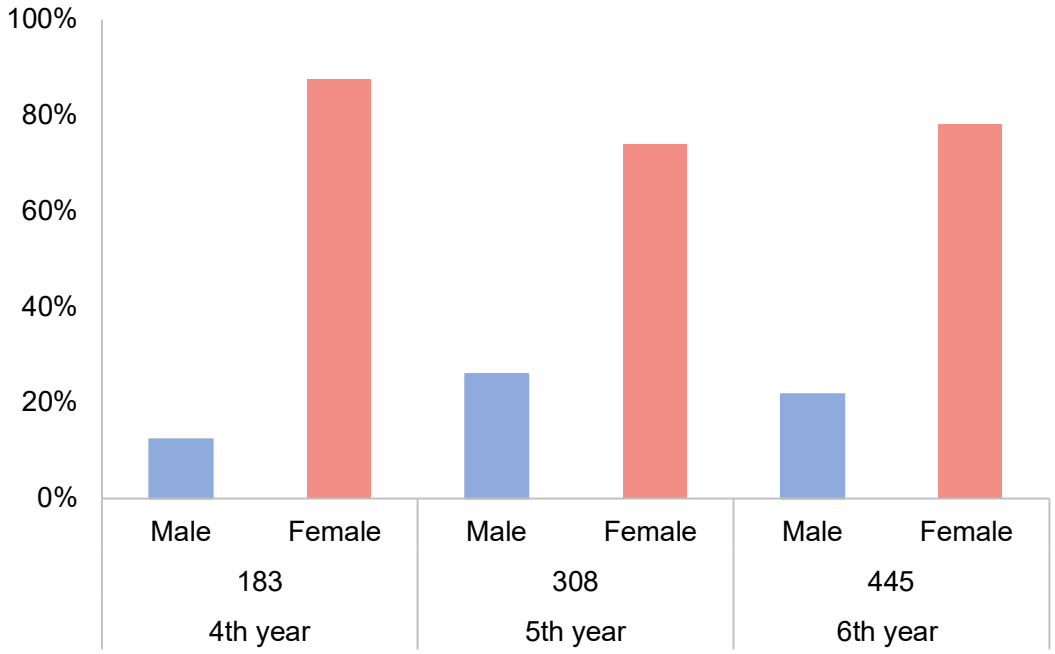

Fig. 1 – Gender distribution by each year of study

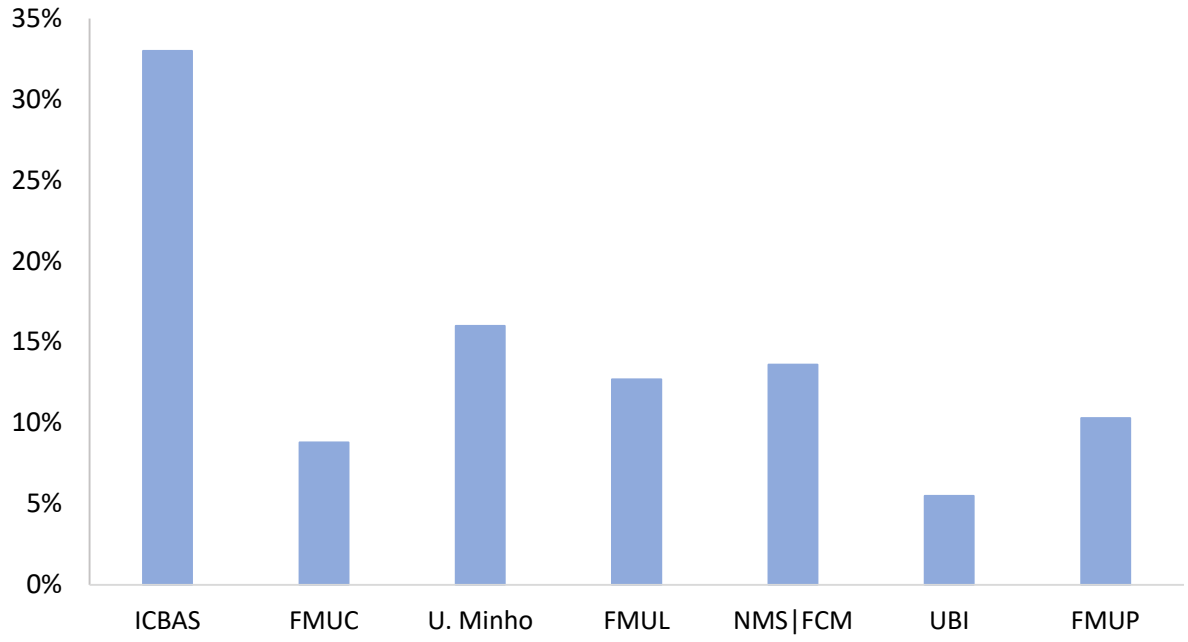

Fig. 2 – Distribution of the students among different medical schools

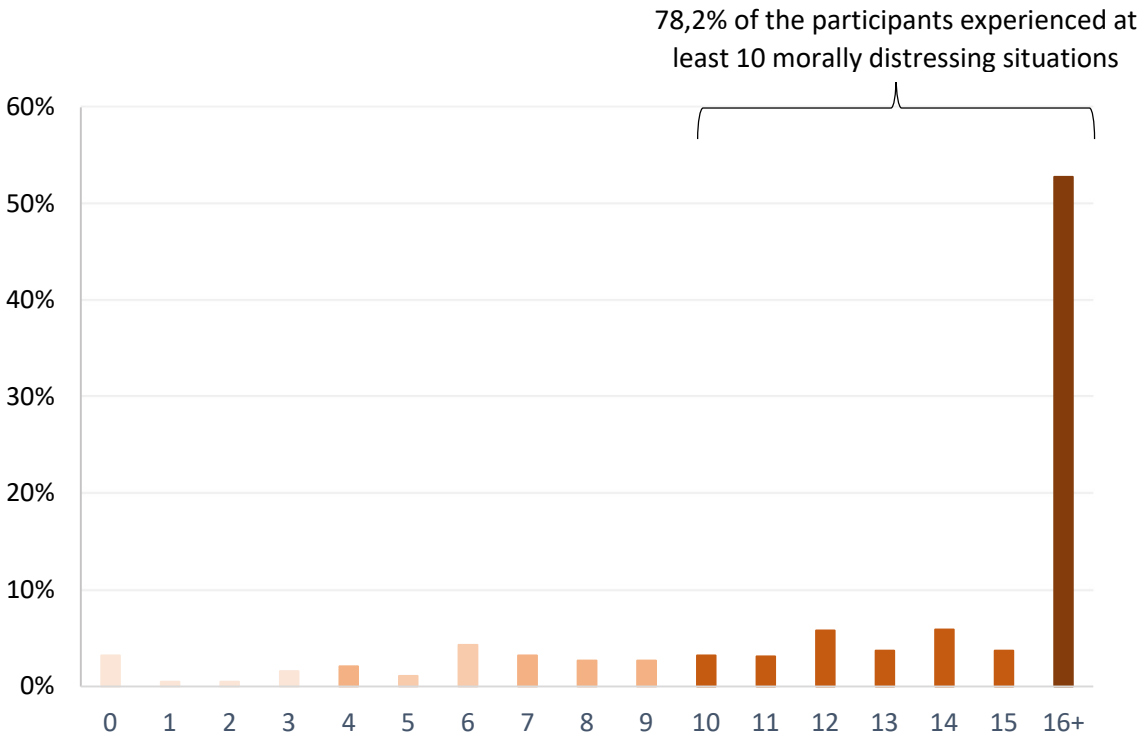

Fig. 3 – Frequency of the number of morally distressing situations experienced by participants

Table II - Occurrence rates and intensity scores for each situation

			Experienced	Anticipated
		Frequency % (n)	**Intensity** median (IQR)	**Intensity** median (IQR)
1	Testemunhar profissionais de saúde a dar "falsas esperanças" a um doente ou família. Witness healthcare providers giving "false hope" to a patient or family.	53 (501)	3 (2-3)	2 (0-3)
2	Dar seguimento a um tratamento agressivo por insistência familiar, mesmo acreditando não ser no melhor interesse do doente. Follow the family's insistence to continue aggressive treatment even though I believe it is not in the best interest of the patient.	40 (377)	3 (2-3)	3 (0-4)
3	Sentir-se pressionado a pedir ou cumprir um pedido de exames e tratamentos que considera serem desnecessários ou inadequados. Feel pressured to order or carry out orders for what I consider to be unnecessary or inappropriate tests and treatments.	**75 (705)**	2 (1-3)	2 (0-3)
4	Estar impossibilitado de prestar os melhores cuidados possíveis devido a pressões da administração ou seguradoras para reduzir custos. Be unable to provide optimal care due to pressures from administrators or insurers to reduce costs.	69 (644)	**3 (3-4)**	**3 (1-4)**
5	Continuar a prestar um tratamento agressivo a uma pessoa que muito provavelmente morrerá, independentemente deste tratamento, quando ninguém toma a decisão de o suspender. Continue to provide aggressive treatment for a person who is most likely to die regardless of this treatment when no one will make a decision to withdraw it.	55 (517)	3 (2-4)	**3 (0-4)**
6	Ser pressionado para não atuar quando verifico que um médico, enfermeiro ou outro membro da equipa cometeu um erro médico e não o reporta.	42 (394)	3 (2-4)	3 (0-4)

	Be pressured to avoid taking action when I learn that a physician, nurse, or other team colleague has made a medical error and does not report it.			
7	Ser solicitado para cuidar de doentes não me sentindo qualificado para o fazer. Be required to care for patients whom I do not feel qualified to care for.	66 (619)	3 (2-4)	3 (0-4)
8	Participar em cuidados que causam sofrimento desnecessário ou não aliviam adequadamente a dor ou outros sintomas. Participate in care that causes unnecessary suffering or does not adequately relieve pain or symptoms.	50 (473)	3 (2-4)	**3 (0-4)**
9	Observar os cuidados ao doente serem afetados devido à falta da sua continuidade. Watch patient care suffer because of a lack of provider continuity.	**74 (695)**	3 (2-4)	2 (0-3)
10	Cumprir com o pedido de um médico ou familiar para não discutir o prognóstico com o doente/família. Follow a physician's or family member's request not to discuss the patient's prognosis with the patient/family.	44 (416)	2 (1-3)	2 (0-3)
11	Testemunhar a violação de um padrão de prática profissional ou de princípios éticos e não se sentir suficientemente apoiado para a denunciar. Witness a violation of a standard of practice or a code of ethics and not feel sufficiently supported to report the violation.	48 (447)	3 (2-4)	3 (0-3)
12	Participar em cuidados com os quais não concordo, mas ter de fazê-lo por medo de litígio. Participate in care that I do not agree with, but do so because of fears of litigation.	31 (292)	3 (2-3)	3 (0-4)
13	Ser-me exigido trabalhar com outros membros da equipa de saúde que não são tão competentes quanto os cuidados ao doente o exigem. Be required to work with other healthcare team members who are not as competent as patient care requires.	44 (408)	3 (2-4)	2 (0-3)
14	Testemunhar prestação de cuidados ao doente com baixa qualidade devido a má comunicação na equipa. Witness low quality of patient care due to poor team communication.	67 (630)	3 (2-4)	2 (0-3)

15	Sentir-se pressionado para ignorar situações nas quais não foi dada informação suficiente aos doentes de modo a garantir o consentimento informado. Feel pressured to ignore situations in which patients have not been given adequate information to ensure informed consent.	56 (524)	3 (2-3)	2 (0-3)
16	Ser solicitado a cuidar de mais doentes do que aqueles que me é possível cuidar em segurança Be required to care for more patients than I can safely care for.	38 (359)	3 (2-4)	2 (0-3)
17	Vivenciar comprometimento dos cuidados ao doente devido a falta de recursos/equipamento/capacidade de camas. Experience compromised patient care due to lack of resources/equipment/bed capacity.	**84 (785)**	**3 (3-4)**	3 (0-4)
18	Vivenciar falta de ação ou apoio administrativo para um problema que compromete os cuidados ao doente. Experience lack of administrative action or support for a problem that is compromising patient care.	68 (640)	3 (2-4)	2 (0-3)
19	Sentir os cuidados ao doente comprometidos por excesso de burocracia. Have excessive documentation requirements that compromise patient care.	**84 (784)**	3 (2-4)	3 (0-3)
20	Temer represálias se falar com franqueza. Fear retribution if I speak up.	**73 (684)**	3 (2-4)	2 (0-3)
21	Sentir insegurança/intimidação/bullying por parte dos meus próprios colegas. Feel unsafe/bullied amongst my own colleagues.	55 (514)	3 (2-4)	1 (1-3)
22	Ter de trabalhar com doentes/familiares abusivos que comprometem a qualidade dos cuidados. Be required to work with abusive patients/family members who are compromising quality of care.	64 (602)	3 (2-3)	3 (0-4)
23	Sentir a obrigação de sobrevalorizar tarefas e medidas de produtividade ou qualidade em detrimento dos cuidados ao doente. Feel required to overemphasize tasks and productivity or quality measures at the expense of patient care.	54 (510)	3 (2-3)	1 (0-3)

24	Ter de cuidar de doentes que têm planos de tratamento ambíguos ou inconsistentes ou que não têm objetivos de cuidados definidos. Be required to care for patients who have unclear or inconsistent treatment plans or who lack goals of care.	47 (439)	2 (2-3)	2 (0-3)
25	Trabalhar em hierarquias de poder na minha equipa, unidade ou instituição que comprometem os cuidados ao doente. Work within power hierarchies in teams, units, and my institution that compromise patient care.	49 (462)	3 (2-3)	2 (0-3)
26	Trabalhar em hierarquias de poder na minha equipa, unidade ou instituição que comprometem os cuidados ao doente. Participate on a team that gives inconsistent messages to a patient/family.	48 (452)	3 (2-3)	2 (0-3)
27	Trabalhar com membros da equipa que não tratam doentes vulneráveis ou estigmatizados com dignidade e respeito. Work with team members who do not treat vulnerable or stigmatized patients with dignity and respect.	58 (544)	**4 (3-4)**	**3 (0-4)**

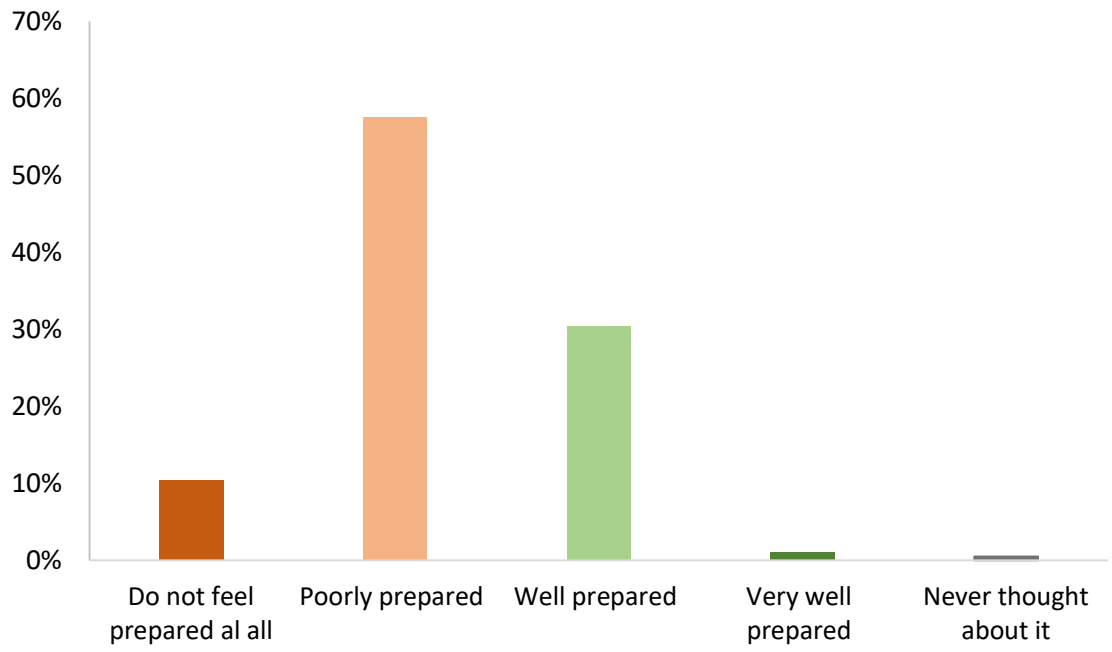

Fig. 4 – How well-prepared participants feel to handle a morally distressing situation

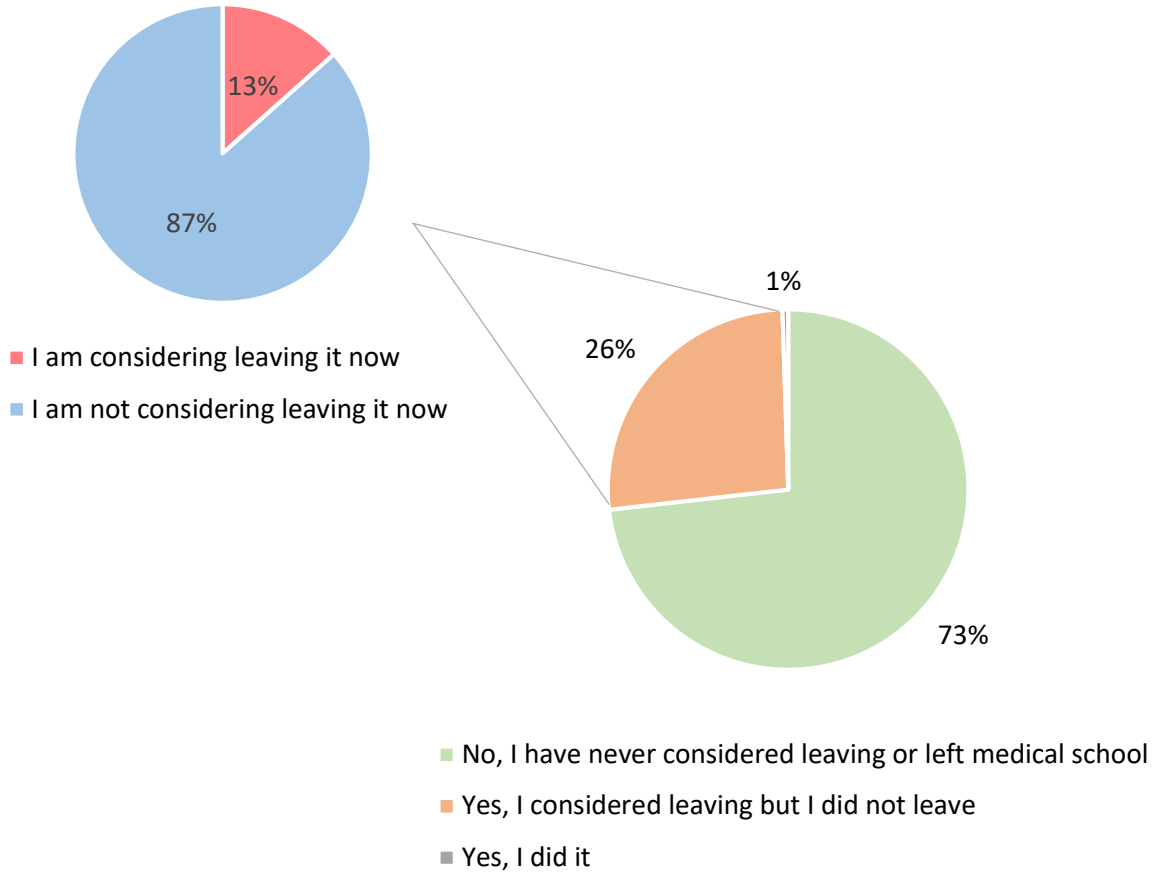

Fig. 5 – Have you ever left or considered leaving medical school due to moral distress? If you ever had considered leaving medical school, are you considering leaving it now?

Table III – Composite score of moral distress by year of study

Year of study	Composite score of moral distress, median [IQR]
4th	77 [26-112]
5th	67 [36,25-102]
6th	96 [58-136]

Table IV – Composite score of moral distress by medical school

Medical school	Composite score of moral distress Median [IQR]		*p* value
ICBAS	78 [25-122,25]		
		FMUC	**0,024***
		U. Minho	0,859
		FMUL	**0,006***
		NMS | FCM	**0,006***
		UBI	0,471
		FMUP	0,979
FMUC	97 [58-113]		
		U. Minho	0,056
		FMUL	0,887
		NMS | FCM	0,955
		UBI	0,332
		FMUP	0,065
U. MINHO	67 [58-136]		
		FMUL	**0,022***
		NMS | FCM	**0,025***
		UBI	0,575
		FMUP	0,911
FMUP	67 [38-132]		
		FMUL	**0,030***
		NMS|FCM	**0,035***
		UBI	0,542
FMUL	89 [67-132]		
		NMS | FCM	0,923
		UBI	0,248
NMS|FCM	92 [61,25-115]		
		UBI	0,275
UBI	79 [64-90]		

* Statistically significant difference.

Abbreviations: FMUP, Faculdade de Medicina da Universidade do Porto; FMUL, Faculdade de Medicina da Universidade de Lisboa; FMUC, Faculdade de Medicina da Universidade de Coimbra; ICBAS, Instituto de Ciências Biomédicas Abel Salazar; NMS|FCM, Nova Medical School | Faculdade de Ciências Médicas; UBI, Universidade da Beira Interior; U. Minho, Universidade do Minho.

REFERENCES

1. Hajar R. The Physician's Oath: Historical Perspectives. *Heart Views.* Oct-Dec 2017;18(4):154-159.
2. Markose A, Krishnan R, Ramesh M. Medical ethics. *J Pharm Bioallied Sci.* Oct 2016;8(Suppl 1):S1-S4.
3. Genuis SJ. Dismembering the ethical physician. *Postgrad Med J.* Apr 2006;82(966):233-238.
4. Kallergis G. [The contribution of the relationship between therapist-patient and the context of the professional relationship]. *Psychiatriki.* Apr-Jun 2019;30(2):165-174.
5. Indla V, Radhika MS. Hippocratic oath: Losing relevance in today's world? *Indian J Psychiatry.* Apr 2019;61(Suppl 4):S773-S775.
6. Askitopoulou H, Vgontzas AN. The relevance of the Hippocratic Oath to the ethical and moral values of contemporary medicine. Part II: interpretation of the Hippocratic Oath-today's perspective. *Eur Spine J.* Jul 2018;27(7):1491-1500.
7. Teixeira CM, Carvalho AS, Pereira SM. Responsibility: from its conceptual foundations to its practical application in intensive care units *Acta Bioethica.* 2018;24(1):47-56.
8. Wiesing U. The Hippocratic Oath and the Declaration of Geneva: legitimisation attempts of professional conduct. *Med Health Care Philos.* Mar 2020;23(1):81-86.
9. Zahedi F, Sanjari M, Aala M, et al. The code of ethics for nurses. *Iran J Public Health.* 2013;42(Supple1):1-8.
10. American Nurses' Association. *Code of ethics for nurses with interpretive statements*. Washington, D.C.: American Nurses Association; 2001.
11. Jameton A. *Nursing Practice: The Ethical Issues*: Prentice-Hall; 1984.
12. Jameton A. Dilemmas of moral distress: moral responsibility and nursing practice. *AWHONNS Clin Issues Perinat Womens Health Nurs.* 1993;4(4):542-551.
13. Fourie C. Moral distress and moral conflict in clinical ethics. *Bioethics.* Feb 2015;29(2):91-97.
14. Epstein EG, Whitehead PB, Prompahakul C, Thacker LR, Hamric AB. Enhancing Understanding of Moral Distress: The Measure of Moral Distress for Health Care Professionals. *AJOB Empir Bioeth.* Apr-Jun 2019;10(2):113-124.
15. Fourie C. Who Is Experiencing What Kind of Moral Distress? Distinctions for Moving from a Narrow to a Broad Definition of Moral Distress. *AMA journal of ethics.* Jun 1 2017;19(6):578-584.
16. Epstein EG, Hamric AB. Moral distress, moral residue, and the crescendo effect. *The Journal of clinical ethics.* Winter 2009;20(4):330-342.
17. Thurn T, Anneser J. Medical Students' Experiences of Moral Distress in End-of-Life Care. *J Palliat Med.* May 21 2019.
18. Wiggleton C, Petrusa E, Loomis K, et al. Medical students' experiences of moral distress: development of a web-based survey. *Acad Med.* Jan 2010;85(1):111-117.
19. Berger JT. Moral distress in medical education and training. *J Gen Intern Med.* Feb 2014;29(2):395-398.
20. Corley MC, Elswick RK, Gorman M, Clor T. Development and evaluation of a moral distress scale. *J Adv Nurs.* Jan 2001;33(2):250-256.
21. Hamric AB, Borchers, C.T., Epstein, E.G. Development and Testing of an Instrument to Measure Moral Distress in Healthcare Professionals. *AJOB Primary Research.* 2012;3(2):1-9.
22. Allen R, Judkins-Cohn T, deVelasco R, et al. Moral distress among healthcare professionals at a health system. *JONAS Healthc Law Ethics Regul.* Jul-Sep 2013;15(3):111-118; quiz 119-120.

23. Trotochaud K, Coleman JR, Krawiecki N, McCracken C. Moral Distress in Pediatric Healthcare Providers. *J Pediatr Nurs.* Nov-Dec 2015;30(6):908-914.

24. Dodek PM, Wong H, Norena M, et al. Moral distress in intensive care unit professionals is associated with profession, age, and years of experience. *J Crit Care.* Feb 2016;31(1):178-182.

25. Lamiani G, Setti I, Barlascini L, Vegni E, Argentero P. Measuring Moral Distress Among Critical Care Clinicians: Validation and Psychometric Properties of the Italian Moral Distress Scale-Revised. *Crit Care Med.* Mar 2017;45(3):430-437.

26. Eysenbach G. Improving the quality of Web surveys: the Checklist for Reporting Results of Internet E-Surveys (CHERRIES). *J Med Internet Res.* Sep 29 2004;6(3):e34.

27. Mokkink LB, Terwee CB, Patrick DL, et al. The COSMIN study reached international consensus on taxonomy, terminology, and definitions of measurement properties for health-related patient-reported outcomes. *J Clin Epidemiol.* Jul 2010;63(7):737-745.

28. Beaton DE, Bombardier C, Guillemin F, Ferraz MB. Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine (Phila Pa 1976).* Dec 15 2000;25(24):3186-3191.

29. Wild D, Grove A, Martin M, et al. Principles of Good Practice for the Translation and Cultural Adaptation Process for Patient-Reported Outcomes (PRO) Measures: report of the ISPOR Task Force for Translation and Cultural Adaptation. *Value Health.* Mar-Apr 2005;8(2):94-104.

30. Mobley MJ, Rady MY, Verheijde JL, Patel B, Larson JS. The relationship between moral distress and perception of futile care in the critical care unit. *Intensive Crit Care Nurs.* Oct 2007;23(5):256-263.

31. Rice EM, Rady MY, Hamrick A, Verheijde JL, Pendergast DK. Determinants of moral distress in medical and surgical nurses at an adult acute tertiary care hospital. *J Nurs Manag.* Apr 2008;16(3):360-373.

32. Papathanassoglou ED, Karanikola MN, Kalafati M, Giannakopoulou M, Lemonidou C, Albarran JW. Professional autonomy, collaboration with physicians, and moral distress among European intensive care nurses. *Am J Crit Care.* Mar 2012;21(2):e41-52.

33. Pendry PS. Moral distress: recognizing it to retain nurses. *Nurs Econ.* Jul-Aug 2007;25(4):217-221.

34. Atabay G, Cangarli BG, Penbek S. Impact of ethical climate on moral distress revisited: multidimensional view. *Nursing ethics.* Feb 2015;22(1):103-116.

35. Vannatta J, Schleifer R, Crow S. Part six: The role of narrative in the everyday practice of medicine ethics and mistakes in the everyday practice of medicine. *J Okla State Med Assoc.* Sep 2009;102(9):301-304.

36. O'Neill LD, Wallstedt B, Eika B, Hartvigsen J. Factors associated with dropout in medical education: a literature review. *Med Educ.* May 2011;45(5):440-454.

37. Carrese JA, McDonald EL, Moon M, et al. Everyday ethics in internal medicine resident clinic: an opportunity to teach. *Med Educ.* Jul 2011;45(7):712-721.

ANNEXES

Annex 1 - Web-based survey

Medida do Sofrimento Moral – Profissionais de Saúde

Por favor, leia com atenção a seguinte informação. Se achar que algo está incorreto ou que não está claro, não hesite em solicitar mais informações. Se concorda com a proposta que lhe foi feita, selecione a condição abaixo apresentada.

O presente estudo intitula-se "Medical Students' Experiences of Moral Distress – A multicentre study". Este é um estudo desenvolvido pela aluna Mónica Dias, no âmbito da unidade curricular Tese/Dissertação do 6º ano do Mestrado Integrado em Medicina do ICBAS, com intuito de obtenção do grau Mestre, orientado pela Prof. Doutora Carla Teixeira e coorientado pela Dr.ª Bárbara Antunes. O objetivo principal é avaliar a frequência e intensidade de sofrimento moral entre alunos dos anos clínicos de medicina. O estudo passa pelo preenchimento de um questionário, com duração de cerca de 5 minutos, acerca de situações que poderá ter presenciado/sentido durante a sua formação em ambiente hospitalar.

A participação está isenta de efeitos secundários, não determinando nem influenciando a relação com os docentes e/ou a instituição onde estuda. Prevê-se que o estudo esteja concluído em junho de 2020, altura em que serão divulgados os resultados. A participação no estudo é de caráter voluntário, não havendo qualquer prejuízo caso decida não participar. Os dados recolhidos são confidenciais e serão utilizados exclusivamente para o presente estudo. O anonimato é garantido.

Este estudo obteve parecer ético por parte das comissões de ética de 7 escolas de medicina do país. (ICBAS – 2019/CE/P030(P308/2019/CETI), U. Minho – nº 077/2019, FMUC – nº 081-CE-2019, FMUP – nº 03/2020, FCM – nº83/2019/CEFCM, UBI – nº CE-UBI-Pj-2019-047, FMUL – nº 382/19).
Caso necessite de algum esclarecimento adicional, não hesite em entrar em contacto:
Mónica Dias - Aluna do 6º ano do Mestrado Integrado em Medicina – ICBAS. Endereço eletrónico: monica.dias_96@hotmail.com

Muito obrigada pela sua participação.

* Resposta obrigatória para submissão

Consentimento informado, livre e esclarecido *

☐ Ao responder e submeter o formulário, declaro ter lido e compreendido este documento, tendo-me sido garantida a possibilidade de, em qualquer altura, recusar participar neste estudo sem qualquer tipo de consequências. Desta forma, aceito participar no estudo e permito a utilização dos dados que de forma voluntária forneço, confiando que apenas serão utilizados para esta investigação e nas garantias de confidencialidade e anonimato que me são dadas pela investigadora.

O sofrimento moral acontece quando os profissionais não podem realizar o que acreditam ser ações eticamente apropriadas devido a constrangimentos ou barreiras.

Este inquérito apresenta situações que acontecem na prática clínica.

Se alguma vez experienciou estas situações, estas podem ou não ter sido moralmente difíceis. Por favor, indique com que frequência vivenciou a situação descrita em cada item (de 0 a 4, sendo 0=nunca e 4=muito frequentemente) e quantifique o quanto lhe provocou sofrimento moral (de 0 a 4, sendo 0=nenhum e 4=muito intenso). Se nunca vivenciou determinada situação, selecione "0" (nunca) para a frequência. Mesmo que não tenha vivenciado a situação, por favor, indique quanto sofrimento moral lhe poderia ter causado se ela tivesse ocorrido na sua prática.

Note que responderá a cada item, assinalando a sua resposta nas duas dimensões: Frequência e Nível de Sofrimento.

Idade: *

_____

Sexo: *

Selecione apenas uma opção.

☐ Feminino

☐ Masculino

☐ Não me identifico com nenhum dos anteriores

Ano de curso: *

Selecione apenas uma opção.

- [ ] 4º
- [ ] 5º
- [ ] 6º

Faculdade: *

Selecione apenas uma opção.

- [ ] ICBAS
- [ ] FMUP
- [ ] Escola de Medicina da U.Minho
- [ ] FCM - Nova Lisboa
- [ ] FMUL
- [ ] FMUC
- [ ] FCS – UBI

1. Testemunhar profissionais de saúde a dar “falsas esperanças” a um doente ou família.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

2. Dar seguimento a um tratamento agressivo por insistência familiar, mesmo acreditando não ser no melhor interesse do doente.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

3. Sentir-se pressionado a pedir ou cumprir um pedido de exames e tratamentos que considera serem desnecessários ou inadequados.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

4. Estar impossibilitado de prestar os melhores cuidados possíveis devido a pressões da administração ou seguradoras para reduzir custos.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

5. Continuar a prestar um tratamento agressivo a uma pessoa que muito provavelmente morrerá, independentemente deste tratamento, quando ninguém toma a decisão de o suspender.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

6. Ser pressionado para não atuar quando verifico que um médico, enfermeiro ou outro membro da equipa cometeu um erro médico e não o reporta.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

7. Ser solicitado para cuidar de doentes não me sentindo qualificado para o fazer.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

8. Participar em cuidados que causam sofrimento desnecessário ou não aliviam adequadamente a dor ou outros sintomas.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

9. Observar os cuidados ao doente serem afetados devido à falta da sua continuidade.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

10. Cumprir com o pedido de um médico ou familiar para não discutir o prognóstico com o doente/família.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

11. Testemunhar a violação de um padrão de prática profissional ou de princípios éticos e não se sentir suficientemente apoiado para a denunciar.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

12. Participar em cuidados com os quais não concordo, mas ter de fazê-lo por medo de litígio.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

13. Ser-me exigido trabalhar com outros membros da equipa de saúde que não são tão competentes quanto os cuidados ao doente o exigem.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

14. Testemunhar prestação de cuidados ao doente com baixa qualidade devido a má comunicação na equipa.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

15. Sentir-se pressionado para ignorar situações nas quais não foi dada informação suficiente aos doentes de modo a garantir o consentimento informado.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	◯	◯	◯	◯	◯
Nível de Sofrimento	◯	◯	◯	◯	◯

16. Ser solicitado a cuidar de mais doentes do que aqueles que me é possível cuidar em segurança.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	◯	◯	◯	◯	◯
Nível de Sofrimento	◯	◯	◯	◯	◯

17. Vivenciar comprometimento dos cuidados ao doente devido a falta de recursos/equipamento/capacidade de camas.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	◯	◯	◯	◯	◯
Nível de Sofrimento	◯	◯	◯	◯	◯

18. Vivenciar falta de ação ou apoio administrativo para um problema que compromete os cuidados ao doente.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	◯	◯	◯	◯	◯
Nível de Sofrimento	◯	◯	◯	◯	◯

19. Sentir os cuidados ao doente comprometidos por excesso de burocracia.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	◯	◯	◯	◯	◯
Nível de Sofrimento	◯	◯	◯	◯	◯

20. Temer represálias se falar com franqueza.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	◯	◯	◯	◯	◯
Nível de Sofrimento	◯	◯	◯	◯	◯

21. Sentir insegurança/intimidação/bullying por parte dos meus próprios colegas.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	◯	◯	◯	◯	◯
Nível de Sofrimento	◯	◯	◯	◯	◯

22. Ter de trabalhar com doentes/familiares abusivos que comprometem a qualidade dos cuidados.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	◯	◯	◯	◯	◯
Nível de Sofrimento	◯	◯	◯	◯	◯

23. Sentir a obrigação de sobrevalorizar tarefas e medidas de produtividade ou qualidade em detrimento dos cuidados ao doente.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

24. Ter de cuidar de doentes que têm planos de tratamento ambíguos ou inconsistentes ou que não têm objetivos de cuidados definidos.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

25. Trabalhar em hierarquias de poder na minha equipa, unidade ou instituição que comprometem os cuidados ao doente.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

26. Integrar uma equipa que transmite mensagens inconsistentes ao doente/família.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

27. Trabalhar com membros da equipa que não tratam doentes vulneráveis ou estigmatizados com dignidade e respeito.*

Selecione apenas uma opção por linha.

	0	1	2	3	4
Frequência	○	○	○	○	○
Nível de Sofrimento	○	○	○	○	○

28. Se houver outras situações nas quais tenha sentido sofrimento moral, por favor, escreva-as e avalie-as aqui:

_____

_____

_____

_____

29. Já alguma vez deixou ou considerou deixar o curso de medicina devido ao sofrimento moral?*

Selecione apenas uma opção.

- ☐ Não, nunca o fiz nem considerei fazê-lo.
- ☐ Sim, considerei fazê-lo, mas não o fiz.
- ☐ Sim, já o fiz.

30. Está a considerar deixar o curso de medicina devido ao sofrimento moral?*

Selecione apenas uma opção.

- ☐ Sim
- ☐ Não

31. Alguma vez considerou escolher uma especialidade não clínica devido ao sofrimento moral?*

Selecione apenas uma opção.

- ☐ Sim
- ☐ Não

32. Quão bem preparado se sente para lidar com situações potencialmente causadoras de sofrimento moral?*

Selecione apenas uma opção.

- ☐ Não me sinto preparado de todo
- ☐ Mal preparado
- ☐ Bem preparado
- ☐ Muito bem preparado
- ☐ Outra: _____

33. Alguma vez foi abordada esta temática durante o curso de Medicina?*

Selecione apenas uma opção.

- ☐ Sim
- ☐ Não

34. Se tiver algum comentário a fazer sobre a temática, por favor escreva-o aqui:

_____

_____

_____

_____

Annex 2 – Portuguese version of MMD-HP

Medida do Sofrimento Moral – Profissionais de Saúde

O sofrimento moral acontece quando os profissionais não podem realizar o que acreditam ser ações eticamente apropriadas devido a constrangimentos ou barreiras. Este inquérito apresenta situações que acontecem na prática clínica. Se alguma vez experienciou estas situações, estas podem ou não ter sido moralmente difíceis. Por favor, indique com que frequência vivenciou a situação descrita em cada item e quantifique o quanto lhe provocou sofrimento moral. Se nunca vivenciou determinada situação, selecione "0" (nunca) para a **frequência**. Mesmo que não tenha vivenciado a situação, por favor, indique **quanto sofrimento moral** lhe poderia ter causado se ela tivesse ocorrido na sua prática.

Note que responderá a cada item, assinalando a sua resposta nas duas dimensões: Frequência e Nível de Sofrimento.

	Frequência					**Nível de Sofrimento**				
	Nunca				Muito frequentemente	Nenhum				Muito intenso
	0	1	2	3	4	0	1	2	3	4
1. Testemunhar profissionais de saúde a dar "falsas esperanças" a um doente ou família.										
2. Dar seguimento a um tratamento agressivo por insistência familiar, mesmo acreditando não ser no melhor interesse do doente.										
3. Sentir-se pressionado a pedir ou cumprir um pedido de exames e tratamentos que considera serem desnecessários ou inadequados.										
4. Estar impossibilitado de prestar os melhores cuidados possíveis devido a pressões da administração ou seguradoras para reduzir custos.										
5. Continuar a prestar um tratamento agressivo a uma pessoa que muito provavelmente morrerá, independentemente deste tratamento, quando ninguém toma a decisão de o suspender.										
6. Ser pressionado para não atuar quando verifico que um médico, enfermeiro ou outro membro da equipa cometeu um erro médico e não o reporta.										
7. Ser solicitado para cuidar de doentes não me sentindo qualificado para o fazer.										
8. Participar em cuidados que causam sofrimento desnecessário ou não aliviam adequadamente a dor ou outros sintomas.										
9. Observar os cuidados ao doente serem afetados devido à falta da sua continuidade.										
10. Cumprir com o pedido de um médico ou familiar para não discutir o prognóstico com o doente/família.										

11. Testemunhar a violação de um padrão de prática profissional ou de princípios éticos e não se sentir suficientemente apoiado para a denunciar.										
12. Participar em cuidados com os quais não concordo, mas ter de fazê-lo por medo de litígio.										
13. Ser-me exigido trabalhar com outros membros da equipa de saúde que não são tão competentes quanto os cuidados ao doente o exigem.										
14. Testemunhar prestação de cuidados ao doente com baixa qualidade devido a má comunicação na equipa.										
15. Sentir-se pressionado para ignorar situações nas quais não foi dada informação suficiente aos doentes de modo a garantir o consentimento informado.										
16. Ser solicitado a cuidar de mais doentes do que aqueles que me é possível cuidar em segurança.										
17. Vivenciar comprometimento dos cuidados ao doente devido a falta de recursos/equipamento/capacidade de camas.										
18. Vivenciar falta de ação ou apoio administrativo para um problema que compromete os cuidados ao doente.										
19. Sentir os cuidados ao doente comprometidos por excesso de burocracia.										
20. Temer represálias se falar com franqueza.										
21. Sentir insegurança/intimidação/bullying por parte dos meus próprios colegas.										
22. Ter de trabalhar com doentes/familiares abusivos que comprometem a qualidade dos cuidados.										
23. Sentir a obrigação de sobrevalorizar tarefas e medidas de produtividade ou qualidade em detrimento dos cuidados ao doente.										
24. Ter de cuidar de doentes que têm planos de tratamento ambíguos ou inconsistentes ou que não têm objetivos de cuidados definidos.										
25. Trabalhar em hierarquias de poder na minha equipa, unidade ou instituição que comprometem os cuidados ao doente.										
26. Integrar uma equipa que transmite mensagens inconsistentes ao doente/família.										
27. Trabalhar com membros da equipa que não tratam doentes vulneráveis ou estigmatizados com dignidade e respeito.										
Se houver outras situações nas quais tenha sentido sofrimento moral, por favor, escreva-as e avalie-as aqui:										

Já alguma vez deixou ou considerou deixar o seu cargo devido ao sofrimento moral?

- ☐ Não, nunca o fiz nem considerei fazê-lo.
- ☐ Sim, considerei fazê-lo, mas não o fiz.
- ☐ Sim, já o fiz.

Está a considerar deixar o seu cargo devido ao sofrimento moral?

- ☐ Sim
- ☐ Não

Annex 3 - Approval of ethics committees

The study protocol was reviewed and approved by the relevant institutional ethics boards:

ICBAS – 2019/CE/P030(P308/2019/CETI)

FMUC – nº 081-CE-2019

FMUL – nº 382/19

FMUP – nº 03/2020

NMS | FCM – nº 83/2019/CEFCM

UBI – nº CE-UBI-Pj-2019-047

U. Minho – nº 077/2019