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## RESEARCH ARTICLE

# Moral Distress and Moral Resilience of Health Professionals in a Greek Public Hospital during the Second Wave of Pandemic

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## ABSTRACT

This study examines the factors of moral distress and moral resilience of healthcare professionals employed during the second wave of the pandemic. The target group was the healthcare professionals (HP = 169) who served in the Evangelismos General Hospital covid-clinics and -ICU for the year 2022 and data were collected through life protocols.

Healthcare professionals believe that when faced moral challenges, they are able to discern them and think clearly. They are especially stressed, leading them to possible moral distress situations, when they care for more patients than they can safely handle or they are involved in care that causes unnecessary suffering or does not adequately relieve pain or symptoms. they witness a violation of a standard of practice or moral code. Factors that lead or may lead healthcare professionals to moral distress are nursing safety, unnecessary and deteriorating patient care, and violation of medical confidentiality, violation of standards of practice or moral codes.

The score on the MMD-HP scale indicates low-to-moderate levels of moral distress. Based on the RMRS scale the moral resilience of the healthcare professionals is characterized by moderate-to-high with the highest scores per statement are seen when patient care is getting worse and feel pressured to ignore situations where patients have not been given adequate information. The healthcare professionals report that they have either left or have considered leaving their position in a clinic due to moral distress. The factors that increase the frequency of moral distress and decrease their moral resilience are feeling anxiety, nursing/treatment errors, aggressive treatment, caring for more patients than they can handle, substandard patient care and hierarchical teams. As the frequency of moral distress increases, so does their moral resilience as a mechanism for better permanence. They characterized by low-to-moderate levels of moral distress and moderate-to-high levels of moral resilience, The greater the personal integrity of the health professionals who served at the Athens General Hospital "Evangelismos" and the more experienced they were, the greater their Moral efficacy is predicted to be., Evangelismos General Hospital, MMD-HP and RMRS scales.

## 1. Introduction

The coronavirus pandemic has led to unprecedented needs and demands on the EU and Greece healthcare systems which have far exceeded their limits, exhausted their resources and intensively tested their structure<sup>1</sup>. The geometric increase in the requirements for ICU beds, technological and material resources, combined with the rapid increase on the requests for urgent healthcare services and the uncertainty about the most efficient and optimal ways to deal with the pandemic has led to the development of moral distress among the Greek healthcare professionals (and especially nurses) with their moral resilience being severely demised<sup>2</sup>.

Healthcare professionals during the pandemic in the Greek public healthcare system have experienced increased psychological distress, fear and a greater intention to quit their jobs. Moral distress conditions exist when the healthcare professionals know the right moral action to take from a moral point of view but feel unable to proceed with its implementation<sup>3</sup>. Moral distress is different from moral dilemma<sup>4</sup>. In the case of moral dilemma, each alternative option is characterized by significant disadvantages as it is necessary to take into account the social and organizational ramifications and issues related to responsibility and accountability<sup>5</sup>. The moral obligation of healthcare professionals to provide the best possible care to each and every patient conflicted with the need to align with public healthcare policies during the pandemic that ought to maximize benefit for the utmost number of patients<sup>6</sup>.

McCann et al.<sup>6</sup> stated that nursing is a physically and emotionally demanding

profession. High-role expectations and difficult working conditions put a number of healthcare professionals at risk of burnout and moral distress. Moral distress, and the anxiety related to it, arise in the context of the pandemic when healthcare professionals felt that the decisions that need to be made about their patients' care, or the kind of care that is needed to be provided contradict their moral beliefs and commitments<sup>8</sup>. In the Greek healthcare system, during the pandemic, many moral, social and legal dilemmas, and possible moral distress, have arisen, as the healthcare professionals had to choose which patient should be admitted to the ICU, or provided the mechanical respiratory support equipment, etc<sup>9</sup>. Patients in the covid clinics and ICUs were fighting for their lives without the support of relatives and with healthcare professionals unable to cope with their moral duty due to the heavy workload. There are three independent moral parameters which should not be overlooked and related to moral distress of healthcare personnel, i.e., the well-care of patients, the well-being of health professionals and sharing of moral distress between the health professionals.

Moral distress is observed when in-hospital healthcare professionals in relation to their obligations, as they perceive them, are incompatible with the needs and prevailing beliefs in the external work environment<sup>10</sup>. Explaining moral principles, communication skills and an understanding of the healthcare system through which care is delivered are the basic tools that health professionals must have to deal with the ethical conflicts they experience from the internal and external work environment.

Several factors may increase the likelihood of moral distress, such as specific aspects of

patient care, and internal and external constraints. When caring for patients, the perception of providing inappropriate care can cause moral distress. These factors include but are not limited to in providing unnecessary or futile treatment; inadequate pain relief; false hope to patients or their families; Speeding up the death process; ignoring patients' wishes, and collaboration with other health professionals who may not be able to fulfill their job responsibilities<sup>1-9</sup>. Internal limitations can result in the inability to maintain a vigorous mental and emotional state when healthcare professionals face difficult patient care experiences. Examples of internal constraints include lack of confidence, excessive fear; the inability to deal with the perceived pain, and conflicts with religious or spiritual beliefs. External constraints arise from specific policies and aspects of the ICU work environment. The most common external constraints are the lack of collectivity; the perceived hierarchical structure of healthcare institutions; inadequate communication; hospital or facility policies that conflict with the beliefs of the healthcare professionals; inadequate staff, and compromising care due to cost constraints and concerns<sup>1-10</sup>.

Although healthcare professionals knew and understood the moral right was to provide individualized support to each patient<sup>10</sup>, the requirement to implement policies to protect the Greek public healthcare system during the coronavirus pandemic, has limited their ability to implement them. The extraordinary conditions formed during the pandemic had resulted, and is still resulting in, a strong moral burden on healthcare professionals, who have to display moral resilience in order to be able to respond to the moral dilemmas, distress,

and challenges that arise for the Greek healthcare system<sup>11</sup>. Moral resilience strengthens health personnel in cases of emotional and moral exhaustion, contributes to personal fulfillment, spiritual euphoria and reduces depersonalization<sup>11</sup>. Depersonalization and mental exhaustion are observed in healthcare professionals who downplay or overlook the severity of stressful situations in their working environment, and especially during the second wave of pandemic, trying to achieve their professional goals without having developed safety or decompression mechanisms<sup>11</sup>.

The present study aims to approach and analyze the risk factors that led Greek healthcare professionals to moral distress, during the second wave of the pandemic, its consequences and possible precautionary and therapeutic interventions, and the factors that strengthened moral resilience in covid clinics and ICU's in Greek public healthcare.

## 2. Methodology

This cross-sectional study has approached the issues of moral distress and moral resilience of healthcare professionals in covid clinics and ICU's in Greek public healthcare structures, using the cross-sectional case survey (see<sup>12</sup>). The purpose of the current study is to highlight the risk factors of moral distress, and the corresponding protective factors of moral resilience of the healthcare professionals served in covid clinics and ICU in the Greek public structures during the second wave of the pandemic; based on the fact that they took the burden of dealing with and managing the covid-19 patients with the moral issues arise were particularly intense. Moreover, this study has focused to highlight

the main causes that lead to moral distress, reduced their levels of moral resilience, and the correlation of moral distress with possible thoughts of leaving their position among healthcare professionals.

Our contemporary study in order to collect the available statistical dataset, was based on the six research hypotheses. Data were collected “vertically over time” due to short duration and implementation, using a closed-form protocol that gives high levels of reliability to the research. The following research hypotheses are formulated:

1. What are the factors that most frequently lead healthcare professionals to moral distress in covid clinics and ICU in Greek public structures?
2. Higher responding to moral distress leads to a higher frequency of thoughts about leaving the clinical position of healthcare professionals in covid clinics and ICU in Greek public structures.
3. Stronger responsiveness to moral adversity, personal and relational integrity and moral efficacy are associated with greater moral resilience.

Sample size calculations designed to estimate a minimum sample size that can be sufficient and determine the level of statistical significance were performed using the on-line calculator provided by Qualtrics (<https://www.qualtrics.com/blog/calculating-sample-size>). The healthcare professionals that worked at the Evangelismos General Hospital during the second wave of pandemic were ~ 290, and for 95% confidence level the ideal sample size was ~ 166 healthcare professionals which is statistically significant ( $p < 0.05$ ). So, a total of 169 healthcare

professionals participated in the research, employed in the covid clinics and ICU of Evangelismos General Hospital for the year 2022. The non-probability sampling, as well as the snowball method was employed; following the initial sampling designs, although the results should not be generalized<sup>13</sup>. The research protocols were collected between July and August 2022 with a special permission obtained from the scientific council of the Evangelismos General Hospital. Moral issues included the information of the purposes of the research, preservation of anonymity, confidentiality and privacy of personal data and voluntary nature of the healthcare professionals' participation.

## 2.1 MEASURES

The constructed protocol comprises 60 questions dispersed in three parts. In the first part 14 statements is related to the healthcare professionals demographics (e.g., gender, age, level of education, previous service in nursing, previous service in the specific nursing department, position in the hospital, previous experience in covid clinic and ICUs and possible infection from covid-19 by the healthcare professionals themselves and by members of their families, if their family members belong to vulnerable groups, the capacity of the clinic ICU to staff and patients; average and daily, marital status and number of children). The second part of the protocol relies on the Rushton Moral Resilience Scale (RMRS<sup>14, 15</sup>). The RMRS scale comprises 17 statements and consists of four subscales which concern the factors of moral adversity, personal integrity, relational integrity and moral efficacy. All statements are coded in a way, so the higher scores achieved also indicate greater resilience. This necessitates

the recording of negatively worded statements<sup>14, 15</sup>. The score for each subscale is obtained by calculating the mean score for the subscale statements, and the total score by adding up all of the statements (from 1 to 17).

The third part of the protocol has relied on the Measure of Moral Distress for Healthcare Professionals (MMD-HP) scale which measures the causes of moral distress of the healthcare professionals<sup>16</sup>. The MMD-HP scale comprises 27 statements that investigate how often a moral situation occurs and how painful it is when the healthcare professionals experienced it. These scale's dimensions are involved in moral distress and should always be combined<sup>16</sup>. For the overall score which ranges from 0 to 432, the frequency scores are multiplied by the corresponding risk for each statement, and then are added<sup>16</sup>. Moreover, Epstein et al.<sup>16</sup> (2019) report that the healthcare professionals who have considered leaving their positions due to moral distress were characterized by a mean MMD-HP score of ~ 168, while those who did not consider leaving their position by lower MMD-HP score (mean of ~ 94).

## 2.2 PROCEDURE AND DATA TREATMENT

Consent to conduct this survey was approved by the Scientific Council of the Evaggelismos General Hospital (Prot. No. 18254/22.09.2021, 09/08.02.2021). In order to ensure a minimum required number of protocols, ~ 250 protocols were handed out by the researcher of which 169 (ideal sample size) were returned fully completed, while 3 questionnaires were uncompleted, and so they were not included in the research. As a result, HP = 169 healthcare professionals who met the respective criteria participated in this

research. The healthcare professionals were given the option to complete the protocol either inside or outside the Evaggelismos General Hospital. Before completing the protocol and collecting the statistical data, the researcher informed in detail the healthcare supervisors and professionals who worked in the covid clinic and ICU of the Evaggelismos General Hospital about the purpose of the research, the time of its conduct, and the methodology of data collection. Healthcare professionals who agreed to participate were also informed about the ways to fulfill the protocol.

The IBM SPSS v.29.0 statistical package was used to analyze and process the data collected from the healthcare professionals. Initially, all variables (N = 60), resulted from coding were entered into SPSS v.29.0. In a first stage, that of descriptive statistical analysis, continuous variables were expressed in the form of mean (M) and standard deviation (SD) and 95% confidence intervals, while discrete variables were expressed in absolute frequency (N) and relative frequency (N%). To measure the reliability of the subscales, the internal consistency factor was calculated by using Cronbach's  $\alpha$  (where  $\alpha$  values  $\geq 0.7$  are considered acceptable<sup>17</sup>). Calculations were performed for the whole protocol, as well as for separately each scale, i.e., RMRS and MMD-HP for the total sample (N = 169). The Cronbach's  $\alpha$  reliability index ranges from 0.77 to 0.88, so the reliability of the protocol is high.

Moreover, chi-square test, t-test (non-parametric Mann-Whitney) and F-test (non-parametric Kruskal-Wallis, with the co-application of the test of homogeneity of variance was performed); following<sup>9, 11</sup>. Kaiser-

Meyer-Olkin coefficient was calculated in order to examine sampling adequacy<sup>18</sup>. Spearman's correlation index ( $\rho$ ) was used to study the relationship between the continuous variable and an ordinal variable. In addition, the method of multivariate analysis using linear regression was applied in order to predict the relationships between the variables. Thus, the coefficients of linear regression, dependence ( $\beta$ ) and their standard errors (standard errors=SE), with 95% confidence interval, the level of statistical significance, p values and coefficients of determination ( $R^2$ ) were calculated. When the dependent variables did not follow a normal distribution, the logarithm of the variable was used. The minimum value of the statistical significance level was set at  $p < 0.05$ , with two-sided significance levels.

### 3. Results

#### 3.1. SAMPLE PROFILE

A total of 169 healthcare professionals from the Evaggelismos General Hospital responded to the protocol. From these ~45% were men, with an average age of  $37 \pm 3$ . The ~34% of them were university nursing graduates, with a working experience of 6-10 years, and the ~72% of them served in the covid ICU. In this particular department, ~72% of the participants had experience of 0-5 years. The healthcare professionals had a nurse position in the ICU clinic (~49%) with a previous experience in the ICU up to 1 year (~49%). They were married (~59%) and had 0 or 1 children. The healthcare professionals were infected by covid-19 themselves (~52%) as well as their family members (~68%) which did not belong to vulnerable groups (~55%).

Finally, the healthcare professionals reported that the capacity of the ICU in terms of human resources was 58 (~34%) or 12 (~23%) while for patients it was either 18 (~34%) or 10 (~15%) depending on the circumstances. The demographic and working characteristics of the sample are given in Table 1.

Table 1. Sample demographics and working characteristics.

Demographics			
		Healthcare professionals	N (%)
Gender	Men	76	45.0
	Women	93	55.0
Age (years M.SD.Confidence Intervals)		37 (3) (1.0-2.0)	
	20-30	63	37.3
	31-40	41	24.3
	41-50	62	36.7
	>51	3	1.8
Marital status	Married	99	58.6
	Single	59	34.9
	Divorced	11	6.5
Number of children	0	74	43.8
	1	45	26.6
	2	34	20.1
	3	15	8.9
	4	1	0.6
Working characteristics			
Professional experience (years.M SD)		2.7 (1.1)	
	0-5	43	25.4
	6-10	43	25.4
	11-15	41	24.3
	16-20	19	11.2
	21-25	18	10.7
	>26	5	3.0
Level of education	HEI	22	13.0
	TE	55	32.5
	BSc	57	33.7
	MSc	24	14.2
	PhD	11	6.5
Hospital Department	Covid ICU	122	72.2
	Covid clinics	36	21.3
Experiencein the department	0-5	111	65.7
	6-10	31	18.3
	>11	27	16.0
Position in covid clinic and ICU	Nurse	82	48.8
	Attending doctor A	18	16.1
	Doctor (resident)	22	13.1
	Attending doctor B	17	12.5
	Radiologist	11	1.2
	Senior NurseManager	3	3.6
	Physiotherapist	16	4.8
Experiencein the ICU	0-1	61	36.3
	1-2	91	54.2
	>3	16	9.5
Covid inflection (healthcare professionals)	Yes	87	51.5
	No	82	48.5
Covid inflection (family members)	Yes	114	67.5
	No	55	32.5
Family members in vulnerable groups	Yes	76	45.0
	No	93	55.0

### 3.2. UNIVARIATE AND BIVARIATE ANALYSIS

The healthcare professionals think that when they have faced a moral dilemma (~59%) and they are able to distinguish it (~44%). Their professional role, choices, and behaviors consistently reflect their values (~57%). They are confident in their ability to discern moral distress regarding their professional role (~49%). They consider as particularly stressful the situations which involve the care of more patients than they can safely care (~41%), witness a violation of a standard of practice or moral code and do not feel they have sufficient support to report it, participate in care that they do not agree with but do so because of fear of litigation (both ~40%), and participate in care that causes unnecessary suffering or does not adequately relieve pain or symptoms (~33%). These can also lead them to moral distress. Due to the aforementioned factors, healthcare professionals reported that they have either left or have considered leaving their position in the covid clinic or ICU due to moral distress (~64%).

On the RMRS scale the healthcare professionals have scored an overall score of 2.6 (SD = 0.4, Cronbach  $\alpha \geq 0.75$ , Table 2), and the following scores for its subscales: Response to moral distress average of 2.2 (SD = 0.7), personal integrity of 6.2 (SD = 1.5), relational integrity of 2.2 (SD = 0.7), and moral efficacy of 3.3 (SD = 0.5). Their moral resilience is considered moderate-to-high, and they have achieved the highest score in the subscale of personal integrity, followed by the subscale of Moral efficacy.

On the MMD-HP scale the healthcare professionals scored between 27 and 238, with an overall mean of 129 (SD = 56, Median = 197, Cronbach  $\alpha = 0.81$ , Table 2). Their

scoring indicates low-to-moderate levels of moral distress<sup>16</sup>. The highest scores are scored for the statements regarding the cases where patient care is getting worse, due to the lack of continuity of the health care provider (M = 6.5, SD = 6.6), feel pressured to ignore situations in which patients have not been given sufficient information to ensure informed consent (M = 6.4, SD = 5.6), and required to care for more patients than they can safely care for (M = 7.3, SD = 5.7). Moreover, in the present study the healthcare professionals considering the possibility of leaving their position due to moral distress achieved MMMD-HP scores of M = 129.3 (SD = 21), whilst the ones who do not intend to leave their position achieved MMMD-HP lower scores (M = 111.6, SD = 15).



**Table 2. Scoring on RMRS and MMD-HP scales.**

RMRS scale (N =168)				
	Mean	SD	Min	Max
Response to Moral Adversity	2.2	0.7	1	4
Personal Integrity	6.2	1.5	2.3	9.3
Relational Integrity	2.2	0.7	1	4
Moral Efficacy	3.3	0.5	1	4
Total Score	2.6	0.4	1	4
MMD-HP scale (N =168)				
Total Score	129.2	56.3	27	238

The chi-square test for the MMD-HP scale suggests that all correlations were strong and positive ( $\chi^2 \geq 450$ ,  $p = 0.000$ ). For the RMRS scale strong positive correlations are found regarding the ability to discern moral situations ( $\chi^2 \approx 330$ ,  $p = 0.000$ ), and thinking clearly when faced with a moral dilemma ( $\chi^2 \approx 32.0$ ,  $p = 0.003$ ). The Kaiser-Meyer-Olkin (KMO) coefficient for sampling adequacy, for the RMSS scale has a value of 0.77, for the MMD-HP scale of 0.83, and for the total sample of 0.81; indicating optimal data adequacy both by scale and for the total sample. The values of the Kolmogorov-Smirnov index for the RMSS scale range between 0.20 and 0.34, while for the MMD-HP scale between 0.17 and 0.49 ( $p = 0.00$ ). So, our data follow the normal distribution.

### 3.3. STATISTICAL DIFFERENCES AND CORRELATIONS

Two statistically significant differences in terms of gender are reported for the RMRS scale statements related to whether the professional role, choices and behaviors consistently reflect their values ( $t(3, 169) = 2.5$ ,

$p = 0.014$ ), and if they are to distinguish the moral conflicts ( $t(3, 169) = 2.2$ ,  $p = 0.030$ ). The different opinions are expressed by male healthcare professionals. A statistical difference is also reported between those professionals who have been infected by covid-19 and those have not. The difference concerns the possible criticism of their opinions, in which case their values are at stake ( $t(3, 169) = -2.2$ ,  $p = 0.030$ ), and is expressed by those who have not been ill by covid-19.

From the F-test for the RMRS scale statistical differences also emerged regarding marital status. The different opinions are expressed by the married healthcare professionals and concern the statement that difficult moral situations make them feel weak ( $F(2, 169) = 3.9$ ,  $p = 0.021$ ). Statistically significant differences are also recorded regarding the healthcare professionals' seniority in the ICU. More experienced healthcare professionals (> 3 years compared to those with experience of 0-1 years) disagree that stressful situations are dominated by persistent moral conflicts ( $F(2, 169) = 4.7$ ,  $p = 0.011$ ), that when faced with a

moral challenge, they are able to discern a moral conflict ( $F(2, 169) = 3.2, p = 0.044$ ) and doing or saying things they later regret ( $F(2, 169) = 5.1, p = 0.008$ ).

For the MMD-HP scale statistical differences also arise in terms of age and are mainly expressed by the younger healthcare professionals (age-group of 20-30 years, versus age-group of > 51 years). These differences relate to when they have witnessed a violation of a practice standard or moral code and do not feel adequately supported to report it ( $F(3, 169) = 2.8, p = 0.043$ ), when perceive low quality in patients care due to poor team communication ( $F(3, 169) = 3.1, p = 0.028$ ), and on whether they have ever left or considered leaving a clinical position due to moral distress ( $F(3, 169) = 2.8, p = 0.040$ ). Statistically significant differences are also recorded in terms of education. These are expressed by the university graduates and concern the case of accepting a doctor's or family member's request not to discuss the patient's prognosis with the patient/family ( $F(4, 169) = 3.5, p = 0.009$ ). Differences are also observed for the department they serve at Evaggelismos General Hospital. Physiotherapists expressed different opinions regarding the fact that have being required to care for more patients than they can safely care for ( $F(2, 169) = 4.0, p = 0.019$ ). Differences are also recorded depending on family status. Unmarried healthcare professionals, who are also younger, expressed a different view of when they engage in care that causes unnecessary suffering or does not adequately relieve pain or symptoms ( $F(2, 169) = 3.2, p = 0.045$ ). Finally, statistically significant differences are recorded depending on the working

experience in the ICU. Health professionals with less experience (0-1 year versus >3 years) disagree with situations that required them to work with other members of the healthcare team who are not adequately skilled ( $F(2, 169) = 4.0, p = 0.019$ ), and that they felt pressured to ignore situations in which patients have not been given sufficient information to ensure consent ( $F(2, 169) = 3.3, p = 0.034$ ).

Summarizing the results of the t- and F-tests, statistically significant differences are recorded for both scales (i.e., RMRS and MMD-HP) in relation to gender, whether or not they have been inflected by covid, family status, and previous experience in the ICU, age, education, and department they serve in the Evaggelismos General Hospital. The different opinions were expressed by the healthcare professionals about factors/situations that prevail in the covid clinic and ICU clinic, such as the professional role, their values, persistent moral conflicts and challenges, violations of practice standards or moral codes, support from the hospital/management, the quality of patient care, poor communication with other healthcare professionals, adverse patient prognosis, the number of patients treated/treated, unnecessary or ineffective treatments, the nursing expertise, and the consent of patients or their families to treatments. The aforementioned factors are likely to lead the healthcare professionals included in our sample to increased levels of moral distress and decreased levels of moral resilience.

Significant differences are reported for the dimensions of the RMRS scale and the measure of moral distress for the scores achieved by health professionals, using the Spearman correlation ( $\rho$ ). For the RMRS

scale, strong positive internal correlations are recorded for the dimension "Response to moral adversity" ( $\rho = 0.69, p = 0.000$ ) and between the dimensions "Response to moral adversity" and "Moral efficacy" ( $\rho = 0.60, p = 0.000$ ) which are related to situations that cause weakness and the resulting distress.

For the MMD-HP scale, strong, positive internal correlations were recorded for avoiding take action when mistakes are made and aggressive treatments ( $\rho = 0.65, p = 0.000$ ), when needed to care for more patients than they could safely care for and lack of resources/equipment/bed capacity ( $\rho = 0.75, p = 0.000$ ), hierarchy that risked patients care ( $\rho = 0.68, p = 0.000$ ), and working with team members who do not treat vulnerable or stigmatized patients with dignity and respect ( $r = 0.71, p = 0.000$ ). The same correlations were observed between the variables of the RMRS and MMD-HP scales.

From the correlation matrix (Table 3) of moral resilience (RMRS) and moral distress scales (MMD-HP), strong negative correlations are

reported between the dimensions of moral resilience "Personal integrity" and "Relationship integrity" with the measure of moral distress ( $\rho = -0.71$ , and  $-0.64, p = 0.000$ ). On the contrary, the dimension "Personal integrity" was found to be significantly and positively related to the dimension of the same scale "Relationship integrity" ( $\rho = 0.68, p = 0.000$ ). The non-parametric Mann-Whitney and Kruskal-Wallis tests were used to identify statistically significant differences between demographic characteristics and dimensions of moral resilience and distress. Age ( $K \approx 9.12, p = .028 < .05$ ), experience ( $K \approx 16.70, p = .005 < .05$ ) and the fact that members of their family belonged to vulnerable groups were found to differ according to the dimension "Moral efficacy" ( $U \approx 2831, p = .031 < .05$ ).

Table 3. Correlations of RMRS and MMD-HP scales.

	Response to Moral Adversity	Personal Integrity	Relational Integrity	Moral Efficacy	Measure of Moral Distress
Response to Moral Adversity	1	0.50*	0.44	0.00	-0.06
Personal Integrity		1	0.68	0.04	-0.71
Relational Integrity			1	-0.11	-0.64
Moral Efficacy				1	-0.05
Measure of Moral Distress					1

\*rho. \*\*p ≤ 0.05

To determine the factors that are independently associated with the dimension "Moral efficacy", a multivariate linear regression was performed. The score of "Moral efficacy", was used as the dependent variable and the demographic/working characteristics of health professionals (i.e., age, experience whether their family members belong to vulnerable groups), the dimensions "Personal integrity" and "Relationship integrity", and the moral distress scale score were used as independent variables (Table 4). Only age and the measure

of moral distress were not found to be independently related to moral efficacy ( $F(6, 166) = 4.52, p = .023$ ). The results indicate that the dimension "Personal Integrity" and experience have a positive effect on moral efficacy. The dimension "Relationship integrity", and whether their family members belong to vulnerable groups, in which case they were more at risk during the pandemic have a negative effect on their Moral efficacy.

**Table 4. Multivariate linear regression the "Ethical effectiveness" dimension.**

	$\beta^+$	$t^{++}$	$SE^{+++}$	$p$
Personal Integrity	.205	1.950	.033	.053
Relational Integrity	-.266	-2.547	.071	.012
Age	-.152	-1.256	.063	.211
Experience	.283	2.308	.041	.022
Family members belong to vulnerable groups	-.171	-2.178	.074	.031
Measure of Moral Distress	-.071	-.929	.001	.354

+Dependence coefficient, ++Correlation coefficient,+++Standard error.  
(Note: The logarithm of the dependent variable was used).

#### 4. Discussion

Correlations with previous research were based on the literature review of Young & Rushton<sup>19</sup> (using 192 articles) and Salari et al.<sup>20</sup> (on 1090 articles from 2005 to 2020). These literature reviews relate unswervingly moral distress to moral sensitivity and resilience of health professionals; as moral distress is one of the most important problems faced by them in patient care. For a comprehensive consideration, focusing on the pandemic, the results of Shahriari et al.<sup>21</sup>, Musto, Rodney, & Vanderheide<sup>22</sup>, Bayat, Shahriari, & Keshvari<sup>23</sup>, Haahr, Norlyk, Martinsen, & Dreyer<sup>24</sup>

Malliarou et al.<sup>11</sup>, Arries-Kleyenstüber<sup>25</sup>, Llop-Gironés et al.<sup>26</sup>, Kim & Chang<sup>27</sup>, and Sarafis et al.<sup>28</sup> are also used. In order to increase the moral resilience of healthcare professionals during the pandemic, positive emotions and life satisfaction must be reinforced by the Greek health system.

Healthcare professionals are one of the groups in the Greek health system with the lowest levels of moral resilience and the highest levels of moral distress, as also reported by Bayat, Shahriari, & Keshvari<sup>23</sup> and Haahr, Norlyk, Martinsen, & Dreyer<sup>24</sup>. These researchers also emphasize the importance of

creating a positive moral climate to reduce moral distress as well as the need for professional interventions to support moral issues. Constant training, moral-psychological interventions and effective use of healthcare resources promote their moral resilience. Beyond the development of progressive preventive strategies based on epidemiological assessments, clinical knowledge and optimization of resources, dealing with the health pandemic requires reflection on moral values such as those of individual responsibility, transparency, sensitivity and rationality that lead in reducing nurses' moral dilemmas and moral resilience in order to provide more effective patient care<sup>29</sup>.

Moral distress has been associated with healthcare professionals with a number of negative psychological and physical manifestations. These include decreased moral sensitivity, decreased quality of patient care, headaches, guilt, anger, intention to change or leaving the profession<sup>30</sup>. Healthcare professionals have an interest in and need to reduce moral distress as the rates of moral distress among these professionals can be as high as ~30%, and they cannot be reduced solely to moral distress but may be complicit with other factors such as low payment and increasing workplace demands and workload pressure. Higher moral intensity and frequency of moral distress can be associated with unsafe working conditions. Healthcare professionals have an interest in and need to reduce moral distress. Negative moral climate in the workplace contributes to healthcare professionals considering leaving their current position.<sup>30</sup>

The healthcare professionals who participated in the research report that their professional

role, choices, and behaviors consistently reflected their values and expressed their moral concerns. When they have faced moral dilemmas, they were able to discern them and think clearly. They have developed moral resilience and are ready, confident and also prepared to discern, face and avoid moral distress in the covid clinic and ICU during the pandemic. They are not stressed when they are unable to provide ideal care, because of pressure from management, or if it is required to care for patients, when they felt they lack the necessary skills, and they did not feared punishment for standing tall or when they worked with team members who did not treat vulnerable or stigmatized patients with dignity and respect. Instead, they became particularly anxious when they cared more patients than they can safely handle, they are engaged in cares that caused unnecessary suffering or does not adequately relieve pain or symptoms, and when they noticed that patient care is getting worse. Also stressful were the situations, leading to possible moral distress, that experienced when they witnessed a violation of a standard of practice or moral codes, and do not felt they have sufficient support to report the violation, participated in cares that did not they agree but did so because of the fear of litigation, being required to work with other members of the healthcare team who were not as skilled, when they observed poor quality of patient care due to poor team communication, and finally when they felt that there are excessive documentation requirements that endanger patient care.

Our results suggest that the factors that lead or may lead to moral distress are nursing safety problems, unnecessary care, caring for deteriorating patients, violation of medical

confidentiality and standards of practice or codes of ethics, involvement in care they disagree with, the lack of expertise or inexperience of their colleagues, the quality of care and excessive demands from the health system (administration, medical staff, patients and their families). Healthcare professionals report that they have either left, or have considered leaving their position in the clinic or ICU-Covid, due to moral distress. At present, however, they are not thinking of leaving their position. For the Greek healthcare system some of these factors are reported by Lepidou et al.<sup>31</sup>, Tsironi et al.<sup>32</sup>, Parpa<sup>33</sup> and Sikaras et al.<sup>34</sup>. These factors included are futile treatment, collaboration with less competent nurses and concealment of the truth. Nursing staff experience higher rates of stress when the patient worsens and the family needs to be informed. These factors lead health professionals to experience stressful and morally unpleasant situations. Health professionals report that they are particularly disturbed by these situations and that they often push them to consider quitting.

The healthcare professionals have scored the highest scores on the RMRS scale on the personal integrity subscale, followed by the moral efficacy subscale. Based on these scores, it is suggested that the healthcare professionals from the Evangelismos General Hospital are characterized by the tendency to maintain their moral values in response to the moral adversities they experience. In addition, they felt capable and confident to face moral dilemmas in their hospital everyday life under pandemic conditions and to defend themselves, their personal integrity and their values. Their moral resilience was moderate-

to-high (although Haikali<sup>35</sup> reported  $M \approx 42$ ,  $SD \approx 14$  compared to  $M \approx 130$ ,  $SD \approx 17$ ). The scores on the MMD-HP scale indicate low-to-moderate levels of moral distress. The highest scores per statement are observed for cases where patient care was getting worse, when they perceived poor quality of patient care due to poor team communication, due to reduced relational integrity, felt pressured to ignore situations in which patients have not been adequately informed, to secure informed consent, are required to care for more patients than can manage for, and experience substandard patient care due to a lack of resources, equipment, and bed capacity. They have considered the possibility of leaving their position due to moral distress (as also reported by Epstein et al.<sup>16</sup>).

## 5. Conclusions

It is more than evident that the moral and psychological state of the Greek healthcare professionals from the Evangelismos General Hospital during the second wave pandemic affects the quality of their work and exacerbates the Greek public healthcare system problems. Based on the synthesis of our results we conclude that:

- The healthcare professionals report that they have considered, although they are not currently thinking, leaving their position due to moral distress;
- As the frequency of moral distress increases, so does their moral resilience as a mechanism for better permanence;
- Are characterized by low-to-moderate levels of moral distress and moderate-to-high levels of moral resilience, as they trend to maintain their moral values in response to the moral

adversities they experience during the second wave of pandemic;

- For this sample, the factors that are likely to lead nurses to increased levels of moral distress and decreased levels of moral resilience are their professional role, their values, persistent moral conflicts and challenges, violations of standards of practice or codes ethics, support from the hospital, quality in patient care, poor communication with other colleagues, poor prognosis of patients, number of patients being treated/treated, unnecessary or ineffective treatments, mistakes made by nurses /three with aggressive treatment, the number of patients nurses can safely care for, substandard patient care, and for the hierarchy in the structure in which they work;
- The correlations recorded between the frequency of moral distress and the level of personal and relational integrity suggest that as the frequency of moral distress increases, the moral resilience of health professionals decreases; and finally
- The greater the personal integrity of the health professionals who served at the Athens General Hospital "Evangelismos" and the more experienced they were, the greater their Moral efficacy is predicted to be. When there were relationship problems in the team of health professionals or with the hospital administration, then their Moral efficacy also decreased, leading to potential moral distress situations.

The levels of healthcare professionals' moral resilience during the pandemic are low and moral distress is constantly increasing. Moral resilience plays a protective role. To increase the moral resilience of healthcare

professionals working during the second wave of the pandemic, positive emotions and life satisfaction must be reinforced by the healthcare system. The obtained results are expected to strengthen the effort towards the detection of the causes that lead to a greater degree of moral distress among healthcare professionals in covid-clinics and ICU in Greek public healthcare structures.

This study which relates to moral distress and moral resilience of healthcare professionals is subjected to limitations. The main advantage of the present research is that it attempted to investigate the relationship between moral distress and moral resilience of healthcare professionals in a central public hospital of Athens, such as Evangelismos General Hospital. The sample comes from this hospital only. Because the sample of nurses was relatively small (N = 169), it was preferred to present the conclusions without generalizing them. There were also limitations regarding the time for conducting the research, which was particularly limited. It was observed that the participation of some departments from the reference covid-19 Evangelismos General Hospital, such as that of physical therapy, was low, mainly due to a lack of staff under pandemic conditions. The survey is characterized by high response rates  $\geq 90\%$  while the size and homogeneity of the data is satisfactory. Also, as the research is characterized by defined frames of reference for the moral distress and the moral resilience of nurses, it was not possible to answer all the questions that arose during the process of collecting, processing and interpreting the data. The above weaknesses do not reduce the dynamics of the research, on the contrary, they highlight the complexity of the

dimension of moral distress and the moral resilience of healthcare professionals in the adverse conditions of the pandemic in the Greek covid-ICUs.



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