

Another Pandemic. How Moral Distress Affected Polish and Lithuanian Clinicians

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The COVID-19 pandemic has transgressed biomedical categories. According to Horton, a “syndemic” infected virtually all societal relations and practices. In particular, the pandemic has created sociomoral ecologies challenging clinical decision-makers. Constraints and pressures related to micro-, meso-, exo-, and macro-ecologies framing physicians, nurses, and medical students in training were identified. These factors exacerbated moral distress among clinicians. In a joint Polish-Lithuanian project, we examined predictors of moral distress in pandemic clinical contexts. A questionnaire-based, real-time, correlational, and comparative study was conducted in Poland and Lithuania after the first pandemic year with N=227 participants. The two national samples found unexpected differences in regular and pandemic-type moral distress levels. Polish participants showed significantly higher moral distress levels than their Lithuanian counterparts. The following article discusses these findings and recommends reinforcing resilient medical decision-making.

1. Introduction

The outbreak of the COVID-19 pandemic challenged health policies and the healthcare workforce in an unprecedented way. Horton (2020) rebaptized it into a “syndemic,” for it has affected the overall societal life, including health provision and health education. Moral distress (moral injury) is one of the factors that is reported to seriously impair the quality of clinical decision-making in the regular routine of physicians and nurses. Let alone in respect of a barely known, highly contagious disease that causes a pandemic across the globe: then decisions – even difficult and risky – cannot be avoided or postponed to a later date. Framed by an unfavorable sociomoral atmosphere or environment (e.g., Colby et al. 1987; Rousseau 1988; Lind, Hartmann and Wakenhut 2000; Weber et al. 2008) in which questioning the legitimacy of clinical decisions by patients, relatives, media, health policymakers, public opinion, etc., has become omnipresent, the pandemic can be regarded as a sociomoral, not only medical challenge. In contrast, a sociomoral atmosphere favorable to decision-makers is created by a constellation of the following factors: “the interplay of norms and value orientations as components of such an atmosphere, especially appraisal

of the community, care for one another, integration, open communication, trust, participation, collective responsibility, respect of human dignity, procedural fairness, order” (Weber et al. 2008, 172).

In the following, we report on our Polish-Lithuanian study to examine levels of moral distress in health workers after the 1st year of the pandemic. Predictors for moral distress related to micro-, meso-, exo-, and macro-environments (ecologies, respectively) (e.g., Bronfenbrenner 1977; Eriksson et al. 2018) surrounding clinical decision-makers were identified. We will dedicate the ‘Theoretical Background’ Section to the theorization of these ecologies and the concepts mentioned above. Data were collected from physicians, nurses, and medical students using a questionnaire-based procedure. The method and results obtained will be presented and discussed in the subsequent sections. Unexpectedly, significant differences were found between Polish and Lithuanian participants, as well as within each national sample. We adopted the following hypotheses: (1) There is a correlation between moral distress level and nationality; (2) Moral distress levels significantly correlate with career stage (2a for Poland and 2b for Lithuania); (3) There can be correlations of age, work in intensive care units, and involvement in clinical decision making with moral distress level in participants; (4) There is a significant correlation between regular moral distress and pandemic-related moral distress.

Regarding the choice of countries in which we conducted the study, we justify it as follows: In Poland and Lithuania, the pandemic was declared at the same time (March 2020). The countries are neighbors and close in terms of cultural and historical experience (socialist past, democratic turn in 1989, EU accession in 2004, parallel modernization process, and institutional changes in the public health sector). As researchers, we were curious to know whether this affinity also translates into the preparedness of public health systems to deal with a pandemic. We were particularly interested in examining how healthcare providers deal with the moral distress generated by pandemic ecologies in both neighboring countries. For healthcare providers in both countries, the COVID-19 pandemic was the first and most common such dramatic challenge in decades, unlike for those from regions exposed to regular, epidemic, or endemic, highly contagious diseases, although “all countries remain dangerously unprepared for future epidemics and pandemic threats, including threats potentially more devastating than COVID-19”, as GHS Index demonstrates (<https://www.ghsindex.org>). Using this opportunity, since the level of regular (pandemic emergency unrelated) moral distress has not been examined in either country so far, we set out to score this type of distress as well.

After World War II, in the Central and Eastern European region, where Poland and Lithuania are located, an emergency condition was rarely associated with an epidemic. Rather, it was associated with a military or terrorist attack, accidents, or radioactive contamination. This is evidenced by the range of emergency topics (e.g., Borkowska et al. 2017). Except for the so-called Russian influenza in 1977, bio-assurance and epidemiological prevention were here more prominent in veterinary medicine than in human medicine (e.g., Gliński & Żmuda 2020; Janik 2016; Smreczak & Żmudziński 2016). The concept of creating a modern and integrated medical rescue system in Poland dates back to the last decade of the 20th century. In 1999, the health policy “Integrated Medical Rescue” was introduced, the aim of which was to prepare medical personnel and infrastructure and create clinical procedures (Romańczuk 2018, 31). In Lithuania, we can observe a parallel development. These developments correlated over time with the decline in mortality and improved population health after the collapse of the communist regime (Safaei 2012 and 2006; Vaitkaitis 2008; Karanikolos 2017). But did the health workers in

both countries deal similarly well with the most recent pandemic – namely, in terms of their own resilience to moral distress triggers? Responding to this question required pioneering research in both countries. The results of this research are presented below.

2. Theoretical Background

2.1 Theorising Moral Distress

Moral distress is defined as “knowing the right thing to do but being unable to do so due to various constraints” (Jameton 1984; O’Byrne et al. 2021; Garrett 2020; Dzau et al. 2020; Lin 2020; Morley 2019; Wiggins & Wilbanks 2019; Bursztajn 1998). Although studies on this issue also use terms such as ‘moral injury’ (e.g., Borges et al. 2020; Williamson et al. 2020), ‘moral suffering,’ ‘moral anguish’ (Godshall 2021), and ‘moral harm’ equivalently here, the scope of the latter experiences goes beyond professional (particularly medical and judicial) and even human contexts (e.g., Puryear 2017). In this article, we ponder moral distress, and it is precisely what we have been investigating. However, at a conceptual level, it is not moral distress but well-justified, correct, and valid judgments and opinions that are an integral component of medical decisions. Moral distress is, to put it adequately, an ‘alien body’ for decision-making processes. Even if it chronically accompanies such processes, it cannot be integrated into them as it brings crisis and disintegration to them (e.g., Silverman et al. 2022; Benoit et al. 2018). Instead, “this pressure to act unethically is the defining concept of this phenomenon that can threaten moral integrity and differs from situations that are emotionally distressing or morally troubling” (Silverman et al. 2022, 2).

The emergency contexts produce specific constraints whose causation on medical decision-makers is well known. The sociomoral climate surrounding medical decision-makers in these contexts may also show an additional causative effect on the quality of decision-making processes as such and the consistency of a subject’s performance. It may interfere with decision-making processes. A society confronted with an outbreak of an epidemic, a natural disaster, or a war can exert severe and multiple pressures on those making decisions critical to the life and health of society. Such “environmental influences,” micro- and macro-causalities, and their impact on “the interaction between thought, affect and action” in the affected decision-makers (Bandura 1989, 3) have been examined and described mainly – but not exclusively – in social psychology, discourse psychology, organizational and professional psychology (e.g., de Araújo et al. 2014; Castro de Araujo 2014; Berrios 2009; Philips et al. 2004; Susser 1991; Mackie 1965; Mackie 1980; Cartwright 1979), in particular for clinical decision making contexts (e.g., Cioffi 2021; Borges et al. 2020; Borkowska et al. 2019; Patel et al. 2018; Grady et al. 2018; Milliken 2018; Epstein & Delgado 2010; Hamric et al. 2006; O’Donnell et al. 2008; Campbell et al. 2018; Austin et al. 2017; Wöhlke & Wiesemann 2016; Walston & Walston, 1982; Terris 1987).

2.2 Identifying Regular versus Pandemic Moral Stressors in Social and Sociomedical Contexts

Our study addresses moral distress in the context of medical decision-making in public healthcare. However, the scope of the term ‘moral distress’ is broader and can include decision-making in other public-priority contexts, particularly those of emergency (e.g., Taylor, 2022). Albeit speaking up and critical opinion is an integral part of public

deliberation or discourse, the latter, notably in the face of an emergency, include not only the “unforced force of the better argument” (Habermas 1999, 332) but also the force of the worse argument and the argument of force as well: for instance, verbal threat, pressure, accusation, etc., intended to undermine the legitimacy of decisions and the credibility of decision makers, here representing the public health institutions. From the discourse perspective, moral distress can be seen as a normative, however voiceless – reaction to arguments devoid of rightness, which address a professional representing a legitimate public institution, that is, public health care. These arguments are imbued with unjustified claims to validity, pressure, or persuasion towards the subjects who, in their professional and, at the same time, socially critical situation, are responsible for making the rightest decisions possible. Extraordinary circumstances, such as a permanent pandemic emergency, put healthcare providers on the front line and expose them to multiplied and omnipresent pressures (e.g., Froessler & Abdeen, 2021).

The concept of socioecology, developed by Bronfenbrenner, will be helpful in localizing the sources of these pressures. Bronfenbrenner’s (1977) original division into micro, meso, exo, macro and chrono-level factors is useful for our research study as they all make up the global sociomoral ecology surrounding a medical decision maker. The macro-system level includes, inter alia, legislation, the organizational and structural set-up of the health system, as well as unprinted but widely held social norms and values (Eriksson et al. 2018, 419). Facing the 1st lockdown (March 2020), Polish and Lithuanian medical staff were already systemically overloaded. Poland had, on average, 2.4 physicians and 5.3 nurses per 1.000 citizens, while Lithuania had 4.85 physicians and 7.7 nurses (OECD 2020). The same report estimated Polish healthcare staff capacities as “doctors low/nurses low,” whereas the Lithuanian ones as “doctors high/nurses low.” Further, the Polish medical workforce confronted pandemic protocols, often questioning pre-existing standards (Grochal 2020; Klinger & Otto 2020). As a result, the Polish medical workforce frequently reported sociomoral confusion and pressures. Unlike in Poland, the Lithuanian health department adopted the pre-existing emergency protocols (Resolutions 207, 1226, V-2127, V-1504) and was able to mitigate confusion among clinical decision-makers from the very beginning of the first lockdown.

The exosystem level “embraces social structures – major institutions of the society – such as the world of work, the mass media, and public agencies” (Eriksson et al. 2018, cf.). At this level, public opinion, media, and patient agencies generated pressure, particularly during the 1st lockdown. Both in Poland and Lithuania, medical decision-makers were publicly blamed, also for ‘spreading the virus’ due to dealing with infected patients; from this and other sources, it appears that patients have accused medical staff of poor procedures and decisions to work without proper uniforms; of coming into contact with non-infected patients just after contact with infected patients; of coming to work when a medical worker him/herself was infected – which may have occurred involuntarily until COVID-19 testing was available. As a result of the “crescendo effect” associated with chronic exposure to demanding sociomoral contexts (Borkowska et al. 2019, 102) when, after a certain time, the threshold of resistance and resilience to an unfavorable sociomoral atmosphere is broken, 43% of medical staff in Lithuania (in Poland 6%) were determined to give up their position (e.g., Buchelt & Kowalska-Bobko 2020; Piščalkaitė et al. 2021; Civinskas et al. 2021). An unrealistic view of medicine as omnipotent can also induce inadequate expectations in patients and inadequate feelings of guilt in physicians (Hong 2017; Bell et al. 2002). On the other hand, in numerous countries, pre-pandemic and

pandemic negligence and deficits in healthcare make patients' expectations be taken seriously (MHE 2021).

The *micro-level* is synonymous with an immediate surrounding, that is, a setting, emergency room, hospital ward, or doctor's office, with which medical workers interact daily and in which they make their decisions. The *Meso-level* "comprises interrelations between major settings containing an individual" (Eriksson et al. 2018, 419). Both micro- and Meso-level cover the professional role of nurses, who, according to research, face moral distress more often than doctors, precisely as a result of constant exposure to the manifold pressures arising from complex patient care (cf. Salari et al. 2022; Borkowska et al. 2019; Rice et al. 2008; Elpern et al. 2005). To this classic set of ecologies, we would add social media (digital ecologies), especially in the context of the hostile atmosphere created around clinicians on social media during the pandemic. Such ecologies may affect analogous human and social environments (e.g., Ruotsalainen and Heinonen 2015).

During the pandemic, the key pressures generated at these levels referred to shortages of emergency equipment and hospital beds, the expectations and complaints of patients and their families about the alleged favoring of infected patients over regular ones, and tensions between medical workers. Due to these pressures, doctors and nurses perceived their workplace as 'pathological' (Otto-Duszczak & Klinger 2020).

Factors exemplified above were identified as predicting moral distress in clinical decision-makers. Subsequently, they were investigated in our study. It is worth mentioning that susceptibility to such factors also depends on the cognitive and competence training of the medical decision-maker in question. Lacking expertise on new diseases or logistic skills (Löwy 2020; Rosenbaum 2020) or low self-control of one's own anxiety makes subjects more exposed to interference. As a result, limited ability to act in accordance with internal norms, limited courage to pass and justify decisions autonomously as a professional, low self-confidence, forced consent to perform or not to perform certain activities, professional ethos and habits' erosion, moral disintegration, moral trauma (Crane et al. 2013; Rice et al. 2008; Elpern et al. 2005; Kalvemarm et al. 2004; Baldwin et al. 1997; Gallery et al. 1992); even suicidal tendencies may follow (e.g., Siedlecka 2020). Monitoring the level of moral distress is thus critical to prevent it and promote resilience in medical decision-makers.

3. Methods

3.1 Research Design

A questionnaire was designed in Polish and Lithuanian composed of 1) a demographic item; 2) a 27-item Measure of Moral Distress for Health Care Professionals (MMD-HP) designed and revised by Epstein et al. (2019). On a five-point Likert scale, participants are asked to rate the items by frequency (0 = never to 4 = very frequently) and magnitude (0 = none to 4 = very strong); 3) a self-constructed 6-item pandemic moral distress scale. Finally, the construct 'regular moral distress' is based on 27 items, each item connoting one factor that interferes with clinical decision-making in the clinician's daily practice apart from emergencies. In turn, the construct 'pandemic moral distress' includes 6 items connoting additional specific factors that emerged with the announcement of the pandemic and interfered with clinical decision-making during the first pandemic year. Based on more than 40 sources and, in addition, 60 micro-interviews, we identified a variety of factors responsible for specific moral distress during the pandemic and grouped them into six core

categories. These factors could be located within the global organizational, social, political, etc. ecology outlined in Section II, which surrounded the physician's or nurse's workplace during the first year of the pandemic. Finally, each of the six items in the second, self-constructed questionnaire was preceded by the phrase 'In making decisions that are right and consistent with the core values of the health professions, during the pandemic, health care providers'... 1) are exposed to pressure, complaints, and accusations from patients and their relatives; 2) are exposed to pressure, complaints, and accusations from their superiors and management; 3) are exposed to accusations from the media, social media, and public opinion; 4) are pushed to comply with new and separate clinical procedures and orders; 5) are threatened with persecution and legal criminal sanctions; 6) are accused of acting contrary to Christian values.

The factors responsible for regular moral distress occur in any period of health care providers' daily professional practice, i.e., in pre-, post-, and also pandemic contexts. In contrast, the factors responsible for pandemic moral distress are specific to the epidemiological emergency. Regular moral distress and pandemic moral distress are, therefore, two distinct psycho-moral response patterns and two distinct but related constructs (see Hypothesis 4, Section IV). They have common nature: an emotional state or tendency to experience moral distress across a variety of situations. This emotional state can be measured by a variety of questionnaires. Participants of our study confront the relevant situations in a given questionnaire and rate how frequently and in what intensity they experienced these situations during the past pandemic year. In terms of an operational definition, the self-reported measures contribute to the final *regular moral distress* and *pandemic moral distress* score.

3.2 Procedure

The study design allowed the integration of measures into a reliable and manageable platform. Approaching participants in real-time, when medical settings and universities were out of reach due to pandemic restrictions, was possible. The resulting study is a real-time, correlational, comparative, and cross-sectional one.

Respondents were invited through mailing managed by public medical universities and associations. Due to pandemic restrictions, the optimal way to access respondents was through online platforms. The questionnaire was accompanied by informed opt-out consent. Informed consent was an integral initial part of the questionnaire.

3.3 Participants

Participation was voluntary, random, and anonymized. Involvement in clinical experience collected during the 1st year of the pandemic was essential to participate. Data were collected from a total of $N = 227$, only adult subjects, male and female, of them from Poland $N = 97$, from Lithuania $N = 130$, representing 14 in-patient medical facilities and medical universities.

4. Results

4.1 Sample characteristics

In terms of total sample characteristics, of the $N = 227$ participants, 87.77% were female, and 12.33% were male participants. The Lithuanian subsample comprised 96.2% females and 3.8% males. Of the 88.5% represented cities of over 700,000 inhabitants. All participants were Lithuanian speakers. 48.5% were under 25 years of age, and 51.5% were over 25 years of age. As of the career stage, the subsample covered 16.9% of doctors, 41.5% of nurses, 40.8% of students, and 0.8% of others. 88.7% of students represented year 1, 7.5% years 4 and 5, and 3.8% year 6. 100% of participants declared involvement in collegial clinical decision-making during the 1st year of the pandemic. Regarding intensive care involvement, no data were available.

There were 76.3% female and 23.7% male participants in the Polish subsample. 77.3% represented cities with a population of over 700,000. All were Polish speakers. 52.6% were under 25 years of age, and 47.4% were over 25. As for the career stage, there were 21.6% doctors, 14.4% nurses, 60.8% students, and 3.1% others. 28.8% of the students represented years 2 and 3, 35.6% years 5 and 6, and 35.6% year 6. 49.5% of Polish participants were not involved in clinical decision-making; 16.5% made clinical decisions individually; 34% participated in collegial decision-making during the first year of the pandemic. 62.9% had no experience with intensive care units; 37.1% had such experience. Relevant to our research, the clinical experience of the participants that indicates contact with healthcare facilities during the pandemic is depicted in Fig. 1:

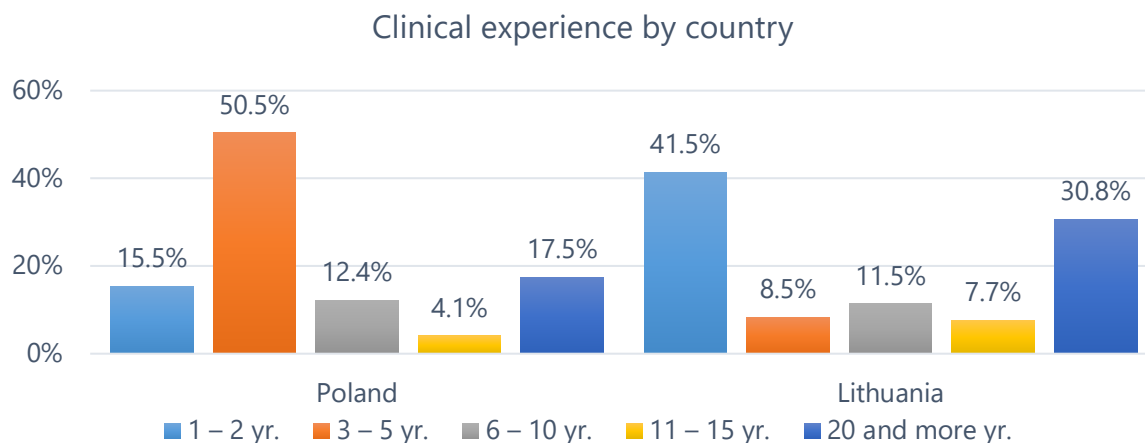


Fig. 1. Clinical experience in years by country.

Scale	Country	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Me</i>	<i>W</i>	<i>p</i>
MD	Poland	97	93.16	62.21	0.00	316.00	88.00	0.93	<0.001 ***
	Lithuania	130	57.45	55.37	0.00	246.00	39.50	0.88	<0.001 ***
PMD	Poland	97	44.46	21.98	0.00	89.00	42.00	0.98	0.086
	Lithuania	120	23.55	21.66	0.00	80.00	17.00	0.90	<0.001 ***

Tab. 1. Descriptive statistics with the focus on normality of distribution test. *N* – number of participants; *M* – mean; *SD* – standard deviation; *Min* – minimum; *Max* – maximum; *Me* – median; MD – regular moral distress; PMD – pandemic moral distress.

In the tab. 1 above, for $N = 97$ participants from Poland and $N = 130$ from Lithuania, descriptive statistics, including mean, minimum and maximum, and median values of the variables *regular moral distress* and *pandemic moral distress*, are displayed. It was also shown that pandemic moral distress in the Polish subsample did not have a distribution significantly deviating from normal, $W = 0.98$; $p = 0.086$. The variables will be presented in the subsequent section.

4.2 Findings

Hypothesis 1: There is a correlation between moral distress level and country.

In the current study, the Cronbach Alpha Coefficient was 0.94 (usually = 0.93). When it comes to regular moral distress, half of the Polish participants had a score of no lower than $Me = 88.00$. The lowest score among this group was $Min = 0.00$, and the highest was $Max = 316.00$. Half of the Lithuanian participants had a score of no higher than $Me = 39.50$. The lowest score was $Min = 0.00$, and the highest was $Max = 246.00$. A significantly higher regular moral distress was found in the Polish participants ($U = 3907.50$; $p < 0.001$; U for non-parametric Mann-Whitney test/test statistics, respectively).

As for pandemic moral distress: The originally self-developed scale appeared to have a very good internal consistency reliability with this sample, with a reported Cronbach Alpha Coefficient of 0.85. Half of the Polish participants scored no lower than $Me = 42.00$. The lowest score among this group was $Min = 0.00$, and the highest was $Max = 89.00$. Half of the Lithuanian participants scored no higher than $Me = 17.00$. The lowest score was $Min = 0.00$, and the highest was $Max = 80.00$. Polish participants were characterized by significantly stronger pandemic moral distress than their Lithuanian counterparts ($U = 2878.50$; $p < 0.001$).

Hypothesis 1 was confirmed: there was a significant correlation between regular moral distress or pandemic-type moral distress and country.

Hypothesis 2a: Regular moral distress and pandemic moral distress significantly correlate with career stage in the Polish sample.

For the purpose of the study, the extremely small occupation category other was eliminated. This was necessary for a reliable study of the correlation. It was rational to use the non-parametric Kruskal-Wallis test comparing the medians of the dependent variable in individual groups. The results are shown in Tab. 2:

Scale	Career Stage	χ^2	<i>df</i>	<i>p</i>	<i>Min</i>	<i>Max</i>	<i>Me</i>
MD	Physician	4.91	2	0.049 *	24.00	316.00	91.00
	Nurse				23.00	229.00	60.50
	Student				0.00	205.00	91.00
PMD	Physician	11.56	2	0.003 **	0.00	76.00	30.00
	Nurse				6.00	80.00	31.00
	Student				5.00	89.00	49.00

Tab. 2. Correlation between regular and pandemic moral distress, and career stage in the Polish sample. χ^2 – test statistics; *df* – degrees of freedom; *p* – statistical significance; *Min* – minimum; *Max* – maximum; *Me* – median; MD – regular moral distress; PMD – pandemic moral distress.

Concerning regular and pandemic moral distress, groups defined in terms of career stage differed statistically significantly. To precisely determine between which groups the differences are significant, the Bonferroni post hoc test (pairwise comparison) was carried out to examine the regular and pandemic moral distress levels (medians) in relation to career stage between the three professional groups. The results of this test are presented in Tab. 3:

Scale	Career Stage		<i>P</i>
MD	Physician	Nurse	0.039 *
	Physician	Student	0.081
	Nurse	Student	0.941
PMD	Physician	Nurse	0.989
	Physician	Student	0.016 *
	Nurse	Student	0.030 *

Tab. 3. Correlations between regular moral distress or pandemic moral distress and career stage in the Polish sample: a pairwise comparison; *p* – statistical significance.

Significant statistical differences between Polish physicians and nurses were stated, $\chi^2(2, N = 94) = 4.91$; $p = 0.049$. Half of the physicians had regular moral distress no lower than $Me = 91.00$, while half of the nurses had regular moral distress no higher than $Me = 60.50$. Polish physicians showed a significantly higher regular moral distress level than nurses. As of pandemic moral distress, statistically significant differences were found between Polish students and physicians and nurses, $\chi^2(2, N = 94) = 11.56$; $p = 0.003$. In half of the students, pandemic moral distress was no lower than $Me = 49.00$. In half of the physicians, pandemic moral distress was no higher than $Me = 30.00$, and in half of the nurses, pandemic moral distress was no higher than $Me = 31.00$. The study showed that Polish medical students faced significantly higher pandemic moral distress levels than physicians or nurses. Hypothesis 2 was partially confirmed: there is a significant correlation between regular and pandemic moral distress and career stage among the Polish respondents.

Hypothesis 2b: Regular and pandemic moral distress significantly correlate with career stage in the Lithuanian sample.

Scale	Career Stage	χ^2	Df	P	Min	Max	Me
MD	Physician	5.10	2	0.078	0.00	187.00	68.50
	Nurse				0.00	246.00	38.00
	Student				0.00	218.00	24.00
PMD	Physician	10.26	2	0.006 **	0.00	16.00	5.00
	Nurse				0.00	78.00	21.00
	Student				0.00	80.00	24.00

Tab. 4. Correlations between regular moral distress, pandemic moral distress and career stage in the Lithuanian sample. χ^2 – test statistics; df – degrees of freedom; p – statistical significance; Min – minimum; Max – maximum; Me – medians.

Hypothesis H2b was entirely confirmed, a significant effect of occupation on regular-type moral distress and pandemic-type moral distress was observed.

As of pandemic moral distress, significant statistical differences were found between physicians, nurses and students in Lithuania, $\chi^2(2, N = 129) = 10.26; p = 0.006$. In half of the physicians, pandemic moral distress was no higher than $Me = 5.00$. In half of the nurses, pandemic moral distress was no higher than $Me = 21.00$, and among half of the students, it was no lower than $Me = 24.00$. It was found that Lithuanian physicians had statistically significantly lower pandemic moral distress levels than nurses and students (in contrast, of the Lithuanian physicians, half reported regular moral distress no lower than $Me = 68.50$; half of the nurses no higher than $Me = 38.00$; and half of the students no higher than $Me = 24.00$). However, a detailed analysis using a multiple regression model identified a significant effect of working as a physician on the level of regular moral distress. The coefficient $\beta = 0.52; p = 0.045$ indicates a strong positive correlation of regular moral distress with working as a physician. In Lithuania, physicians were thus more likely to suffer from regular moral distress than nurses and students. At the same time, a strong negative correlation between physicians' work and pandemic moral distress level was found, $\beta = -0.94; p = 0.001$. Thus, Lithuanian physicians were far less affected by pandemic-type moral stressors than nurses and students, as displayed in Tab. 5:

Dependent variable	Model				Regression values			
	R^2	F	df	p	Predictor	B	T	P
MD	0.02	1.69	125	0.173		96.00	3.74	<0.001 ***
					Career of a physician: physician – nurse or student	0.52	2.03	0.045 *
PMD	0.11	7.94	115	< *** 0.001		31.61	9.53	<0.001 ***
					Career of a physician: physician – nurse or student	-0.94	-3.39	<0.001 ***

Tab. 5. Effect of statistically significant predictors on regular and pandemic moral distress levels in the Lithuanian group – a multiple regression model. R^2 – the proportion of the variance for a dependent variable that's explained by an independent variable; F – test statistic for the overall regression model; df – degrees of freedom; β – standardized beta value; t – test statistics for distinguished predictors; p – statistical significance.

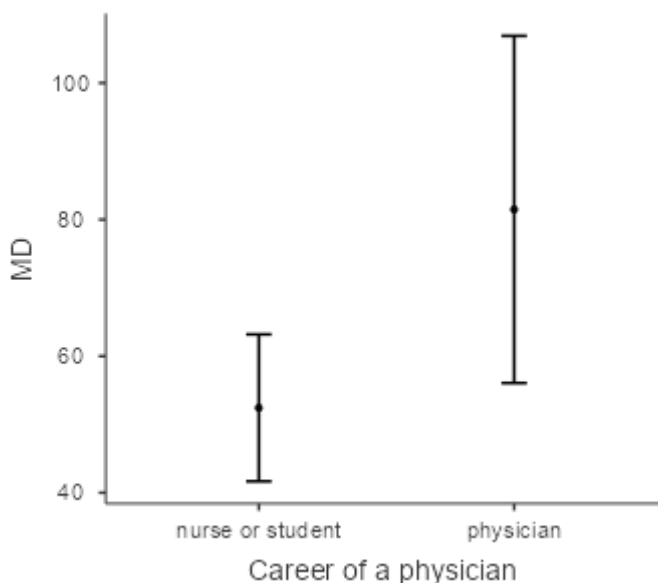


Fig. 2. Correlation between regular moral distress and different career stages in the Lithuanian sample.

Furthermore, Hypothesis 2a was partially confirmed: there was a significant correlation between regular moral distress and career stage amongst Lithuanian respondents. Fig. 2 displays differences in the level of regular moral distress in nurses and students compared to physicians. During the first pandemic year, Lithuanian physicians experienced higher regular moral distress than nurses and students.

Finally, correlations of (1) age, (2) work in intensive care units, (3) involvement in clinical decision-making (as reported by participants in the demographic section) with levels of regular moral distress and pandemic-type moral distress were examined for the Polish sample (data of «2» and «3» were not available for the Lithuanian sample), as depicted in Tab. 6:

Dependent variable	Model				Predictor	Regression value		
	R^2	F	df	p		B	T	p
MD	0.08	3.05	92	0.021 *		103.48	4.76	<0.001 ***
					Intensive care: Yes-No	0.43	2.07	0.041 *
					Clinical decision making: Yes-No	0.43	2.14	0.035 *
PMD	0.16	19.48	95	< *** 0.001		69.29	11.58	<0.001 ***
					Age	-0.41	-4.41	<0.001 ***

Tab. 6. Effect of statistically significant predictors on regular MD levels among the Polish participants – a multiple regression model. R^2 – the proportion of the variance for a dependent variable that’s explained by an independent variable; F – test statistics for the overall regression model; df – degrees of freedom; β – standardized beta value; t – test statistics for distinguished predictors; p – statistical significance.

Limited to the Polish sample, this analysis found a significant effect of work in intensive care units on the level of regular moral distress; $\beta = 0.43$; $p = 0.041$ indicates a moderately strong positive correlation of regular moral distress with work in intensive care units, as the value of the variable describing this type of medical work changes from 'No' to 'Yes,' the level of regular moral distress increases. In other words, working in intensive care units is associated with high levels of regular moral distress. A positive, moderately strong correlation of regular moral distress with involvement in clinical decision-making was also observed, $\beta = 0.43$; $p = 0.035$. The study also found a significant, moderately strong, negative effect of age on levels of pandemic moral distress, $\beta = -0.41$; $p = 0.001$: the older a participant, the lower the pandemic moral distress level. As a result, Hypothesis 3 was partially supported: that working in intensive care units and involvement in clinical decision-making are significant predictors of regular moral distress in Polish participants. Subjects not involved in clinical decision-making showed lower levels of regular moral distress accordingly (Fig. 3). Again, age was a significant predictor of pandemic moral distress measured in the Polish study participants (Fig. 4):

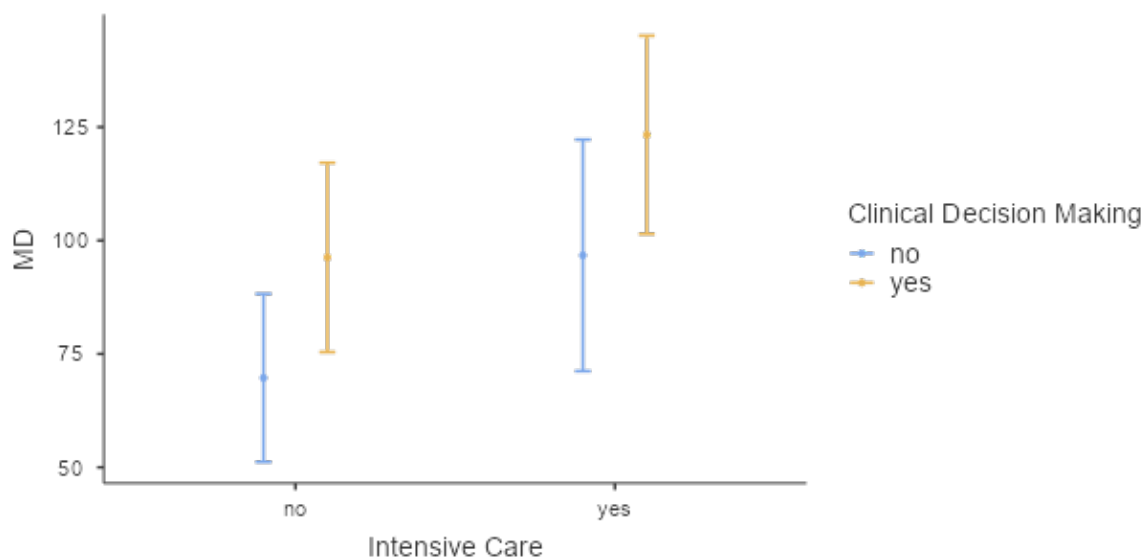


Fig. 3. Polish sample: correlation between regular moral distress level and involvement in the clinical decision and between regular moral distress level and working in intensive care units.

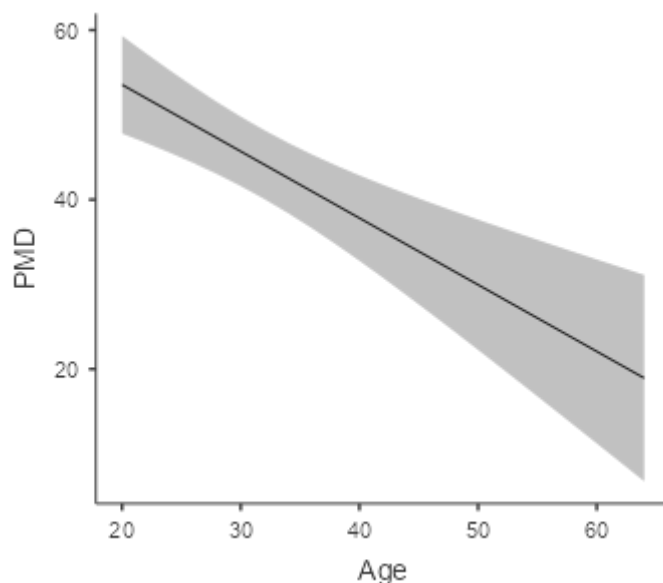


Fig. 4. Correlation between age and pandemic moral distress in the Polish sample.

Hypothesis 4: There is a significant correlation between regular moral distress and pandemic-related moral distress.

The analyzed variables were quantitative variables. Therefore, a correlation coefficient has been used. The type of coefficient used was determined by the nature of the distribution of the variables, which was verified using the Shapiro-Wilk test.

		PMD	
Poland	MD	<i>rho</i>	0.319 **
		<i>p</i>	0.001
Lithuania	MD	<i>rho</i>	0.273 **
		<i>p</i>	0.003
Total	MD	<i>rho</i>	0.365 ***
		<i>p</i>	< 0.001

Tab. 7. Correlation between regular moral distress and pandemic moral distress; *rho* – Spearman’s correlation coefficient; *p* – statistical significance.

The Polish sample had a statistically significant correlation, $rho = 0.32$; $p = 0.001$, between regular moral distress and pandemic-related moral distress. The correlation was weak, as evidenced by the *rho* coefficient value ≤ 0.3 . It was a positive correlation, meaning that when regular moral distress increases, the pandemic-related distress also increases (see Fig.5). In the Lithuanian sample, there was also a statistically significant correlation $rho = 0.27$; $p = 0.003$ between regular moral distress and pandemic-related moral distress. The correlation was moderately strong (as evidenced by a coefficient of $0.3 < rho \leq 0.5$) and positive. This means that as regular moral distress increases, pandemic-related distress also increases (as demonstrated in Fig. 6):

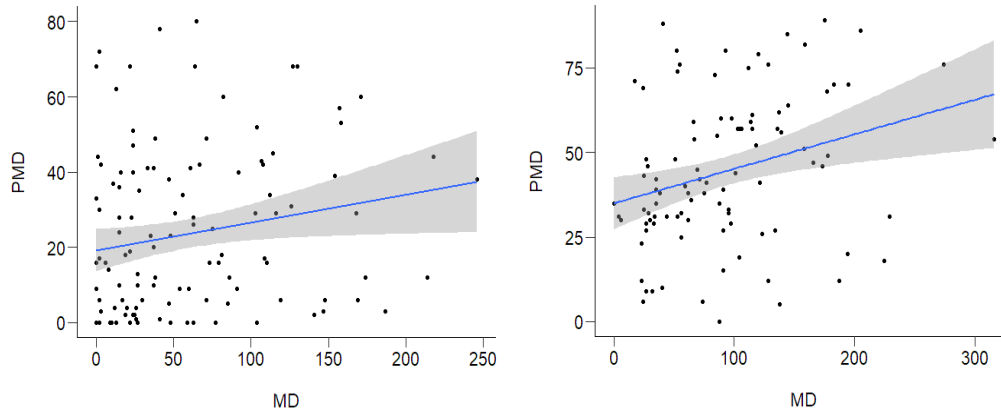


Figure 5 and Figure 6. A weak positive correlation between regular and pandemic moral distress in the Polish sample and a moderately strong positive correlation between regular and pandemic moral distress in the Lithuanian sample.

In the total study sample, there was likewise a statistically significant correlation $\rho = 0.37$; $p < 0.001$ between regular moral distress and pandemic-related moral distress. The correlation was moderately strong and positive (as demonstrated in Fig. 7):

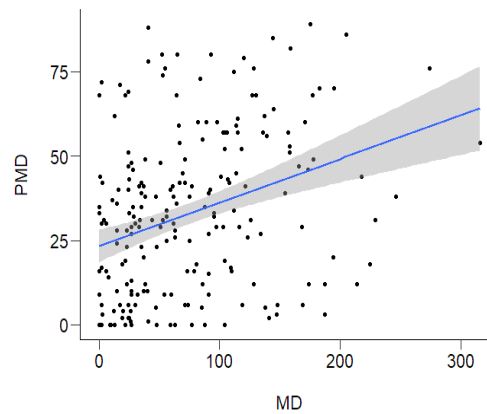


Fig. 7. A moderately strong positive correlation between regular and pandemic moral distress in the total sample.

On the basis of the above results, the hypothesis was accepted: there was a statistically significant correlation between moral distress regularly accompanying the work of a doctor or nurse and pandemic-related moral distress in Polish and Lithuanian subsamples, as well as in the total sample. This means that the two types of moral distress are separate but significantly correlated constructs. This also indicates that the authors' 6-item measuring tool to score pandemic moral distress can be a useful supplement to existing tests.

5. Discussion

To sum up, a total of $N = 227$ participated in the study, of them from Poland, $N = 97$, from Lithuania, and $N = 130$. The levels of regular and pandemic moral distress were twice as

high in Polish respondents compared to Lithuanian counterparts; Hypothesis 1 was confirmed.

Statistically significant correlations were found between the level of moral distress and career stage; Hypotheses 2a and 2b were confirmed. Polish physicians experienced the highest level of regular moral distress; meanwhile, pandemic-type moral distress affected Polish students the most. It was found that Lithuanian physicians had statistically significantly lower pandemic moral distress levels than nurses and students. However, they were more likely to suffer from regular moral distress than nurses and students.

Hypothesis 3, according to which working in intensive care units and involvement in clinical decision-making were significant predictors of high regular moral distress in the Polish sample, was confirmed. The study also found a significant, negative, and moderately strong effect of age on levels of pandemic moral distress. Older participants better dealt with pandemic-type moral stressors; Hypothesis 3 was tested only for the Polish sample.

Hypothesis 4, that the two types of moral distress are distinct but positively and moderately strongly correlated constructs, was confirmed.

The findings also showed that after a year of dealing with the pandemic in the unfavorable sociomoral climate, Polish and Lithuanian health workers experienced very unequal levels of moral distress. The differences may be due to the distinct organizational cultures of Lithuanian healthcare and Polish healthcare systems and different type of clinical training. In the Lithuanian context, policies and procedures were implemented preemptively so that "Lithuania was one of the first countries to take steps against the virus, way before the pandemics were announced" (Savickas 2020; on the meaning of moral distress research for healthcare planning see Wöhlke & Wiesemann 2016). Meanwhile, in Poland, "health care providers themselves evaluate the anti-COVID procedures as good, but their implementation as inadequate and ineffective (...). The public administration's stance in a nutshell: we shall see what will happen. Safety procedures could have been implemented much earlier" (Kaczmarczyk 2020). As for medical facilities in Poland, "the audit found that they were not prepared to manage an epidemic" (source: Dziennik. pl 2020). Also, treatment of patients with other diseases was assessed in the same audit as "overly limited" (NIK/Supreme Audit Office 2022).

Nonetheless, similarities were observed. In both countries, physicians responsible for critical clinical decisions reported the highest level of regular moral distress, which chronically accompanies clinicians, but lower levels of pandemic moral distress. Participants not exhausted by demanding ICU work and decision-making generally better dealt with pandemic moral distress. In contrast, high levels of pandemic moral distress were observed in Polish students. Unlike their Lithuanian counterparts, they had limited insight into new and frequently changing procedures due to remote education.

In the northeastern European region, pre-pandemic levels of moral distress were previously rarely investigated. Borkowska et al. (2019) used the screening method based on Moral Distress Thermometer (MDT) with Polish nurses in anesthesia and ICU, particularly in the context of extra workload hours (mean score 4.43). Laurs et al. (2020) identified that 32.3% of Lithuanian nurses experienced a low level of moral distress (mean score of 1.09), 33.9% a moderate level of distress (mean score of 2.53), and 33.8% a high level of distress. However, due to the discrepancy in research tools and methods, these results cannot be related to ours. Nor can the widespread hypothesis be followed according to which nurses experience stronger regular-type moral distress than doctors. The results

for the Lithuanian sample do not fully confirm this, while the results for the Polish sample found that doctors had higher levels of pandemic moral distress than nurses.

6. Strategies to Deal with Moral Distress

As for resilience, usually associated with remedies against moral distress, in demanding professions and contexts, it is usually defined as “the ability to operate stably” (Omrane et al. 2020; Delikat & Smereka 2021) under unfavorable or critical circumstances, so it refers to robustness or immunity to them (cf. Lind 2021). In their “mutual dependencies” (Elwyn et al. 2012: 1361), the health provider and the patient are autonomous and, at the same time, open to each other. Resilience is needed when external pressures, including interpersonal ones, challenge professional expertise, evidence, and ethical standards. It thus refers to “an individual’s capacity to overcome fear and stand up for his/her core values” (Lachman 2007a; 2007b), be they epistemic or moral. Resilience and moral courage are related (Thomas & McCullough 2015; Reyes et al. 2015; Lachman 2010; Murray 2010). Oser and Reichenbach (2005) defined resilience as an individual resistance to both external and internal pressures “for morality’s sake” and emphasized that “real biographical or historical moral decision making and action always requires something like moral courage, or the will to stand up against unjustified expectations and pressure. There is no relevant moral decision making without stress” (Oser & Reichenbach 2005, 204), isolated or alienated from social context and one’s moral self, they argue. “Situating judgments are influenced by the specific contexts and their constraints, by the feelings of the actors, by expectancy patterns, by the moral indignation of persons concerned or involved, and, of course, by other factors” (cf. Oser & Reichenbach 2005, 218). Thus, resilience is proved when a subject is able to resist to and neutralize “pressure or constraints regarding resources” (cf. Oser & Reichenbach 2005, 218; Habermas 1981; Zajonc 1989) while making a justified decision in challenging contexts. The strategies of pandemic frontline emergency healthcare professionals to deal with moral distress have so far been addressed by few qualitative studies. For instance, “coping strategies included limiting exposure to negative media, drawing upon religious beliefs, and taking strength from their motivation to serve their patients and country,” “fostering positive emotions and mental wellbeing (...) by implementing flexible workplace policies and by ensuring physical protection from the virus (...) social networks, peer support, and a focus on self-care” (Brown et al. 2021, 2; see also Hossain & Clatty 2021 and Romero-García et al. 2022) were identified as fostering resilience in medical workers. For instance, according to Brown and colleagues, sources of resilience can be 1) personal (self-care and mindset based), 2) relational (teamwork, altruism, and social support, family and friendship), and 3) organizational (“design and implementation of policies and procedures”). This means that support can be drawn from these sources in situations where an unfavorable sociomoral atmosphere thickens around the decision-maker. As to personal and professional sources, Kristjánsson (2016, 708) would complement them with personal and professional virtue or phronesis, which can be understood as the well-developed competence to make the right and just judgments and decisions regardless of unfavorable contexts.

7. Limitations of the Study

Regarding the limitations of the study, one major limitation of the study was the male participants’ disparity in Polish and Lithuanian samples. Such a disparity was confirmed

by related studies (e.g., Basevičiūtė et al. 2022). This can also be attributed to the increasing feminization of health professions in the EU. Second, participants' survey fatigue, related to the pandemic research boom, was identified. Pandemic response rates are generally lower than pre-pandemic ones (cf. De Koning et al. 2021; Rothbaum & Bee 2021). We have carried out a real-time study, and such a study in the case of moral distress can, by itself, increase discomfort in respondents, already sufficiently distressed in their professional contexts. Third, data on ICU work and clinical decision-making involvement in Lithuania were not available. Further, due to the difference in teaching modes, Lithuanian nursing students were only able to participate in a pen-and-paper survey. An additional limitation is the relatively small number of participants in the study. In this part of Europe, not least in times of pandemic, it is very difficult to get medical professionals and medical students to participate in any study. One obstacle is the fear of the consequences for the health workers of revealing their names and answering the authorities. Our team encountered this concern and is aware of the strong hierarchization of the medical community.

8. Conclusion

In conclusion, the most important finding is that, after the first year of the pandemic, Polish participants demonstrated significantly higher levels of regular and pandemic moral distress than their Lithuanian counterparts. The policies, healthcare organization, and, finally, the sociomoral ecology in which Lithuanian healthcare providers were on duty during the pandemic emergency allowed them to experience lower moral distress levels compared to their Polish counterparts. According to sources documenting the condition of the Polish healthcare providers due to constant health sector reforms and the overly critical opinion of the organizational structure and culture of this sector, both in the eyes of medical professionals and patients (e.g., Nowak, Barciszewska, and Napiwodzka 2023), it can be assumed that the pandemic amplified the regular moral distress and generated a novel, pandemic-type moral distress. We have defined and explored this new type of moral distress as distinct from regular moral distress. The scale we constructed to measure pandemic moral distress proved to be a reliable research tool. Despite some difficulties in conducting this pioneering study in real-time, under the demanding lockdown conditions, we investigated and compared for the first time the levels of regular and pandemic moral distress in two neighboring countries in north-eastern Europe after the first year of the COVID-19 pandemic. At this time, when confronted with a little investigating but a highly virulent microbe, populations reacted with strong emotions such as fear for their lives, suspicion, and hostility towards those responsible for saving lives. Little is still known about the developmental dynamics of the Polish and Lithuanian public health systems in the post-pandemic era (although it is said in medical circles that COVID-19 is gone, has the pandemic ended?). Here, we have used all sources of information available on the subject at this time. At the same time, we realize that further research is needed, including research explaining, for example, the relatively high mortality rate during the pandemic in Poland and the relationship of this factor to increased public criticism of the administration and healthcare workers.

From a broader, international perspective, closer examination with follow-up studies could explain how to improve or maintain favorable ecologies as well as safe and successful clinical decision-making exactly when health provision is of critical importance for society (cf. Nielsen & Abildgaard 2013; Abbasi et al. 2019). Ecologies of healthcare, including the organizational and the communal, need to be systematically improved to

protect the medical workforce against ecologies that escalate moral distress and lead to the disintegration of decision-making processes.

Let us conclude with Margaret Atwood: in the face of “an emergency crisis,” “when there’s an epidemic of panic, people long for something to blame, because if you can find the thing to blame, you can eliminate the threat” (Atwood 2020).

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