



Moral resilience protects nurses from moral distress and moral injury

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Abstract

Background: The relationship between moral resilience, moral distress, and moral injury among nurses during the COVID-19 pandemic has been widely investigated; however, the literature in the post-COVID-19 era is scarce.

Research aim: To examine the impact of moral resilience on moral distress and moral injury among nurses after the COVID-19 pandemic.

Research design: Cross-sectional study.

Participants and research context: We obtained a convenience sample of 1118 nurses in Greece. We collected demographic data (gender, age) and work-related data (understaffed wards, shift work, clinical experience). We measured moral resilience with the revised “Rushton Moral Resilience Scale”, moral distress with the “Moral Distress Thermometer”, and moral injury with the “Moral Injury Symptom Scale-Healthcare Professionals” version. We adjusted all multivariable models for demographic variables.

Ethical considerations: The Ethics Committee of the Faculty of Nursing, National and Kapodistrian University of Athens approved our study protocol (approval number; 474, approved: November 2023). Our study followed the Declaration of Helsinki.

Findings/results: Multivariable linear regression analysis showed that moral resilience reduced moral distress and moral injury. In particular, we found that increased response to moral adversity was associated

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with decreased moral distress (adjusted coefficient beta = -1.81 , 95% confidence interval [CI] = -2.07 to -1.54). Moreover, we found that increased response to moral adversity (adjusted coefficient beta = -8.24 , 95% CI = -9.37 to -7.10) and increased moral efficacy (adjusted coefficient beta = -3.24 , 95% CI = -5.03 to -1.45) were associated with reduced moral injury.

Conclusions: Moral resilience can reduce the level of moral distress and moral injury among nurses. However, the persistence of moderate moral resilience among Greek nurses does not guarantee its sustainability. To ensure that this resilience is maintained and potentially enhanced, it is imperative for nurse leaders and policymakers to strategically design interventions to address issues at the organizational, team, and individual levels.

Keywords

Greece, moral distress, moral injury, moral resilience, nurses

Introduction

The emergence of the COVID-19 pandemic has exacerbated the mental and moral distress experienced by nurses providing direct patient care, as they were exposed to myriad ethical conflicts, dilemmas and potentially harmful situations.¹ In certain contexts and exceptional circumstances, such as the pandemic, prolonged exposure of healthcare workers to moral distress may turn into moral injury, leading to severe psychological consequences.² The relationship between moral resilience and moral distress is influenced by personal, organizational, and external factors, like those nurses experienced during the COVID-19 crisis.³ Spilg et al.⁴ revealed that moral resilience moderates the onset of potential mental distress events, which ensue to moral distress in the context of a significant stressor, such as the pandemic. Moreover, research during the pandemic identified that moral distress has negatively impacted nurses' moral resilience,⁴ while moral resilience protected nurses against moral injury.⁵ However, literature on the association between moral resilience, moral distress, and moral injury after the COVID-19 pandemic is scarce. Thus, we performed a study to investigate the impact of moral resilience on moral distress and moral injury among nurses after the end of the COVID-19 pandemic.

Background

The term "moral distress" is a crucial concept that characterizes the psychological, emotional, and physical suffering of healthcare professionals, including nurses, when their ethical values and principles are not in alignment with their actions.⁶ This term, adapted by Jameton (1984), sheds light on the significant moral constraints that nurses face: "Moral distress arises when one knows the right thing to do, but institutional constraints make it nearly impossible to pursue the right course of action."⁷ Understanding and addressing moral distress is essential, and its estimation and impact on nurses have been assessed with various methodologies, mainly through valid instruments in several contexts worldwide.^{8,9}

Empirical research has shown that moral distress is a substantial burden for nurses. A recent meta-analysis identified high frequency and severity scores of moral distress among nurses.¹⁰ Before the pandemic, three-level factors were reported that triggered moral distress: patient-level factors, unit-level factors and institutional and policy-level factors.^{9,11,12} During the COVID-19 pandemic, several studies conducted in Canada,⁴ the United States,¹³ Spain,¹⁴ and Romania,¹⁵ have confirmed the aforementioned association. These studies identified contributing factors across various levels, including suboptimal care due to a surge of

patients (patient-level), feelings of guilt for not doing more to help (unit level), and staff shortages due to workforce redeployment (institutional and policy-level factors).

Exposure to exceptional circumstances, like a pandemic, place HCWs at risk for moral injury, a concept originally studied in the military context.¹⁶ Moral injury gained considerable attention due to challenges brought on by the COVID-19 pandemic.¹⁷ There is a distinction between moral injury and moral distress, since moral injury encompasses feelings of betrayal of individuals' ethical values by those with authority and can diminish productivity by leaving moral wounds that are not easily healed.¹⁶ Treatment of moral injury is focused on forgiveness and empathy.¹⁸

During the COVID-19 pandemic, nurses worldwide portrayed moral suffering as they were not able to do the right thing when they witnessed the suffering of COVID-19 patients.¹⁹ However, Morley et al.²⁰ narrative synthesis shed conceptual clarity to the above definition by acknowledging that moral distress may also arise in the context of any "moral event" causally associated with moral uncertainty or moral dilemmas. In the UK, the pandemic resulted in ICU nurses' thoughts of self-harm and substantial rates of probable mental health disorders.²¹ In China,²² a significant proportion of clinicians in the region were at risk of moral injury symptoms, while in the US,⁵ 32.4% of nurses reported a higher occurrence of moral nurses compared to other healthcare workers. A review revealed a diverse range of mental health issues emphasizing the impact of cumulative, spanning more than a year, moral injuries.²³

Finally, as the pandemic receded, healthcare professionals may suffer morally.¹¹ Moral resilience offers a mean to reduce perceived moral distress. It enables and supports an individual to navigate morally complex situations while remaining true to personal values and convictions, thereby maintaining integrity.²⁴ Moral resilience is a multifaceted concept, viewed as a dynamic process contributing to adaptation and positive functioning. Also, moral resilience may offer a new language to generate new ideas on addressing burnout and high nurse turnover, which are often associated with ethical challenges and moral distress.²⁴ Moral resilience and its links with moral distress and moral injury were explored during the pandemic. It was found that having moral resilience can help nurses alleviate the impact of exposure to moral distress,⁴ while moral resilience was protective against symptoms of moral injury.²⁵ The aforementioned descriptions of the concept propose a way to understand how individuals cope with moral suffering by growing themselves and refocusing their core values. However, critiques of the concept argue that it is primarily focused on placing the burden on the individual rather than addressing systemic issues in the workplace that contribute to high rates of moral distress and burnout.²⁶ These critique highlights that the suffering experienced by HCPs is not merely a result of individual failures but is rooted in "hostile and austere systems." These systems are characterized by inadequate resources, political decisions, and structural inefficiencies that create a challenging environment for healthcare delivery.²⁷

Burnout, job dissatisfaction and intention to leave the profession amongst nurses have been previously reported as potential consequences of moral distress implying that moral distress becomes more pronounced as more nurses quit their jobs.^{8,25,28,29} Research among Greek nurses after COVID-19 found that nurses still experience high levels of job burnout and lower job satisfaction, which could lead to attrition from the profession.^{30,31} However, the potential of moral resilience to protect against moral distress and burnout is a promising area for further research, offering hope for a more sustainable nursing workforce.^{6,31}

The literature on whether moral resilience protects nurses from long-term moral distress and moral injury in the post-COVID-19 era is scarce despite the ongoing issue of high burnout levels among healthcare workers. Studies after the COVID-19 pandemic found persistent high job burnout and low job satisfaction, which can lead to reconsidering or quitting the profession.^{30,31} Since burnout exacerbates moral distress and injury, further research is needed to explore whether moral resilience can mitigate these effects and help retain an exhausted nursing workforce. While several studies have investigated the relationship between moral resilience, moral distress, and moral injury during the pandemic, there is a need to be more research on these dynamics in the post-COVID-19 era. Given the significant moral distress and injury experienced by nurses

during the pandemic, monitoring these variables post-pandemic is crucial to understand their moral status. Additionally, identification of predictors of moral distress and moral injury can support policy makers, nurses managers, and healthcare organizations to develop appropriate strategies for improving moral status among nurses.

In this context, we conducted a study to examine the impact of moral resilience on moral distress and moral injury among nurses 4 years after the start of the COVID-19 pandemic.

Methods

Sample and setting

Our study employed a cross-sectional study design. We applied the Strengthening the Reporting of Observational studies in Epidemiology (STROBE) guidelines.³² We conducted a web-based survey using convenience sampling. We collected our data in May 2024. In particular, we created an online version of the study questionnaire using Google forms. Then, a link of the survey was disseminated through social media platforms, such as Facebook, Messenger, LinkedIn, Viber and WhatsApp. Furthermore, we approached nurses that did not use social media through face-to-face interviews to boost participant response. Our inclusion criteria were the following: (a) being a nurse working in healthcare services, such as hospitals, health centers, and nursing homes, (b) having worked during the COVID-19 pandemic, and (c) giving written consent to participate in our study. Since our study investigated moral-related variables such as moral resilience, moral distress and moral injury, we considered that incentives could have acted as a dissuasive factor and for this reason we did not provide any to the participants.

With a total of four predictors and five confounders, an anticipated effect size of 0.03, a statistical power of 99%, and a margin of error of 5%, the sample size was estimated to be 615 nurses.

Instruments

Demographic data included individual variables (gender, age) and work-related variables (understaffed wards, shift work, years of nursing experience). Nurses self-assessed whether they work in understaffed wards. We collected these demographic and work-related variables to eliminate their confounding effect in the relationship between moral resilience, moral distress and moral injury. In other words, we considered these demographic and work-related variables as potential confounders, and, thus, we eliminated to assess the association our study variables.

Moral resilience

We measured moral resilience with the revised Rushton Moral Resilience Scale (RMRS), a 16-item scale measuring four dimensions of moral resilience: responses to moral adversity (four items), personal integrity (four items), relational integrity (four items), and moral efficacy (four items).³³ Score on each dimension ranges from 1 to 4. Higher scores indicate higher moral resilience. We used the RMRS since it covers the multifaceted concept of moral resilience by measuring all the pillars of this concept, that is, moral adversity, personal integrity, relational integrity, and moral efficacy. We considered moral resilience as a dynamic process which contributes to adaptation and positive functioning in an ever-complex healthcare environment.²⁴ We used the Greek valid version of the RMRS.³⁴ In our study, Cronbach's α for the factors "responses to moral adversity," "personal integrity," "relational integrity," and "moral efficacy" was 0.672, 0.782, 0.788, and 0.776, respectively

Moral distress

We measured moral distress with the “Moral Distress Thermometer” (MDT), a single-tool to capture moral distress experienced by nurses in clinical setting.³⁵ The MDT measures the level of moral distress that nurses have been experiencing related to work in the past 2 weeks. Nurses circle a number from 0 (none moral distress) to 10 (worst possible moral distress) on the thermometer. We used the translated and validated Greek version of the MDT.³⁶

Moral injury

We measured moral injury with the 10-item Moral Injury Symptom Scale-Healthcare Professionals version (MISS-HP).³⁷ The MISS-HP measures 10 dimensions of moral injury: shame, guilt, betrayal, moral concerns, loss of trust, loss of religious/spiritual faith, loss of meaning/purpose, religious struggle, self-condemnation, and difficulty forgiving. The MISS-HP score ranges from 10 to 100. Higher scores indicate higher moral injury. We considered that moral injury involves feelings of betrayal of individuals’ moral values by those in power¹⁶ such as the occupational relationship between nurses and their supervisors. The MISS-HP covers this definition of the moral injury since it is a tool that measures several dimensions of this construct such as betrayal, moral concerns, and guilt. Moreover, MISS-HP has been developed to specifically measure the occurrence of moral injury among healthcare professionals who often experience negative feelings from the pressure that healthcare organizations place on them.³⁷ In our study we used the translated and validated Greek version of the MISS-HP.³⁸ In our study, the Cronbach’s α was 0.756.

Ethical Considerations

The Ethics Committee of the Faculty of Nursing, National and Kapodistrian University of Athens approved our study protocol (approval number; 474, approved: November 2023). In the first page of the questionnaire the purpose of the study and use of data were explained. Participants were also informed that survey should take 8 minutes approximately for its completion, whilst their consent was granted upon its completion. In particular, before nurses were given access to the web-based study questionnaire, they were asked whether they consented to participate in the study; if they did, nurses could then complete our study questionnaire. Survey’s completion was voluntary and anonymous. Participants had the right to withdraw from the study any time during data collection. We did not collect personal data from nurses. Our study followed the Declaration of Helsinki.³⁹

Statistical analysis

We used descriptive statistics to describe our sample. In particular, we use numbers and percentages to describe categorical variables. Also, we use mean, standard deviation (SD), median, minimum value, and maximum value to describe continuous variables. We employed Kolmogorov-Smirnov test, Q-Q plots, skewness values, and kurtosis values to assess the distribution of continuous variables. We found that scores on moral resilience, moral distress, and moral injury followed normal distribution. Therefore, we performed univariate and multivariable linear regression analysis to examine the impact of moral resilience on moral distress and moral injury. First, we performed univariate regression analysis with moral distress and moral injury as the dependent variables. Afterward, we constructed multivariable linear regression models to assess the net impact of moral resilience on moral distress and moral injury. In that case, we considered gender, age, understaffed wards, shift work, and years of nursing experience as potential confounders. We present coefficient betas, 95% confidence intervals (CI), p -values, and R^2 . Confidence intervals that included zero

indicated statistically significant results. p -values less than 0.05 were considered statistically significant. We performed statistical analysis with IBM SPSS 21.0 (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.).

Results

Demographic and work-related variables

The respondents' demographics and work-related variables are presented in Table 1. Our sample included 1118 nurses. Mean age of nurses was 36.2 years old ($SD = 10.4$). Most of participants were females (88.3%) and shift workers (76.6%), while eight out of ten nurses reported that they worked in understaffed wards. Mean number of years of nursing experience was 11.1 ($SD = 10.0$).

Study scales

Table 2 shows descriptive statistics for the study scales. Level of moral resilience was moderate in our sample with a mean value of 2.88. Mean score on factors "personal integrity" (3.42) and "moral efficacy" (3.06) was higher than factors "relational integrity" (2.71) and "response to moral adversity" (2.30). Moreover, we found that nurses experienced moderate levels of moral distress and moral injury. In particular, mean moral distress score was 5.17 ($SD = 2.95$), and mean moral injury score was 42.87 ($SD = 13.44$).

Impact of moral resilience on moral distress and moral injury

Multivariable linear regression analysis identified a negative relationship between moral resilience and moral distress. In particular, we found that increased response to moral adversity was associated with decreased moral distress ($\beta = -1.81$, 95% CI = -2.07 to -1.54). We did not find statistically significant relationships between personal integrity, relational integrity, and moral efficacy and moral distress. Linear regression models with moral distress as the dependent variable are shown in Table 3.

After adjusting for confounders we found that moral resilience reduced moral injury (Table 4). In particular, multivariable linear regression analysis showed that increased response to moral adversity

Table 1. Demographic and work-related variables of nurses ($N = 1118$).

Characteristics	<i>N</i>	%
Gender		
Females	987	88.3
Males	131	11.7
Age ^a	36.2	10.4
Understaffed wards		
No	233	20.8
Yes	885	79.2
Shift work		
No	262	23.4
Yes	856	76.6
Years of work experience ^a	11.1	10.0

^amean, standard deviation.

Table 2. Descriptive statistics for the study scales ($N = 1118$).

Scale	Mean	Standard deviation	Median	Minimum value	Maximum value
Moral resilience	2.88	0.40	2.88	1.31	4.00
Response to moral adversity	2.30	0.66	2.25	1.00	4.00
Personal integrity	3.42	0.55	3.50	1.00	4.00
Relational integrity	2.71	0.55	2.75	1.00	4.00
Moral efficacy	3.06	0.49	3.00	1.00	4.00
Moral distress	5.17	2.95	6.00	0.00	10.00
Moral injury	42.87	13.44	41.00	13.00	88.00

Table 3. Linear regression models with moral distress as the dependent variable ($N = 1118$).

Independent variables	Univariate models			Multivariable model ^{a,b}		
	Coefficient beta	95% CI for beta	p-value	Coefficient beta	95% CI for beta	p-value
Response to moral adversity	-1.85	-2.09 to -1.61	<0.001	-1.81	-2.07 to -1.54	<0.001
Personal integrity	-0.34	-0.66 to -0.03	0.035	-0.02	-0.38 to 0.34	0.900
Relational integrity	-0.84	-1.15 to -0.53	<0.001	0.02	-0.31 to 0.35	0.894
Moral efficacy	-0.75	-1.10 to -0.40	<0.001	-0.06	-0.47 to 0.36	0.791

CI: confidence interval.

^aMultivariable model are adjusted for gender, age, understaffed wards, shift work, and work experience.

^b R^2 for the multivariable model = 18.2%, p-value for ANOVA <0.001.

Table 4. Linear regression models with moral injury as the dependent variable ($N = 1118$).

Independent variables	Univariate models			Multivariable model ^{a,b}		
	Coefficient beta	95% CI for beta	p-value	Coefficient beta	95% CI for beta	p-value
Response to moral adversity	-9.25	10.32 to -8.17	<0.001	-8.24	-9.37 to -7.10	<0.001
Personal integrity	-5.45	-6.86 to -4.04	<0.001	-1.42	-2.96 to 0.12	0.070
Relational integrity	-6.44	-7.82 to -5.06	<0.001	-0.52	1.93 to 0.89	0.471
Moral efficacy	-8.50	-10.03 to 6.98	<0.001	-3.24	-5.03 to -1.45	<0.001

CI: confidence interval.

^aMultivariable model is adjusted for gender, age, understaffed wards, shift work, and work experience.

^b R^2 for the multivariable model = 27.3%, p-value for ANOVA <0.001.

(beta = -8.24, 95% CI = -9.37 to -7.10) and increased moral efficacy (beta = -3.24, 95% CI = -5.03 to -1.45) were associated with reduced moral injury. Personal integrity and moral efficacy did not affect moral injury.

Discussion

This study, which assessed the association between moral resilience, moral distress and moral injury amongst nurses 4 years after the first COVID-19 wave, has yielded significant findings. In particular, in our sample we

discovered that moral resilience plays a crucial role in reducing moral injury, while an increased capacity to respond to moral adversity and higher levels of moral efficacy are both negatively associated with moral injury. Furthermore, the nurses in our sample reported moderate levels of moral resilience, moral distress, and moral injury, shedding light on the post-pandemic psychological state of healthcare professionals.

To our knowledge, this is the first study to use a valid moral resilience scale to explore how it relates to moral distress and moral injury in nurses in the post-COVID-19 era. Consistent with previous studies^{4,5,40} our results support the protective impact of moral resilience on moral injury after controlling for confounders such as age, working on shift, and work experience. Such consistency highlights the protective and coping effects of moral resilience against ethical, moral, or other trauma-related stressors,²⁴ while relevant studies during and after the COVID-19 era have been conducted in various organizational healthcare contexts. Coping and collaborative strategies at the organizational level have been proposed to alleviate moral distress and injury. In particular, a qualitative study in Brazil⁴¹ revealed that nurse managers and leaders relied on personal and systemic (institutional) influences to address moral distress and promote moral resilience. In contrast, lack of organizational ethical support or a lack of timely mitigation of moral distress through systematic interventions in organizations, for example, investment to inter connections, being true to one's values and respecting the values of others led nurses to adopt a passive acceptance approach, such as taking leave or quiet quitting.^{3,42,43} Kim et al.⁴⁴ stressed that an ethical environment supported nurses in their actions when they experienced moral challenges. In turn, they experienced less moral distress from organizational or situational factors.

Our findings showed that moral resilience could reduce moral injury and moral distress, similar to previous studies that have been conducted during the pandemic.^{4,5,25} Four years after the pandemic, nurses in our sample experienced elevated moral resilience and reduced moral injury, although their reported moral resilience and moral injury levels were moderate. Notably, Berlinda et al.⁵ reported that Filipino nurses reported higher moral resilience levels during the pandemic than Greek nurses' moral resilience after the pandemic, using the same instrument. Canadian nurses also reported high levels of resilience during the pandemic.⁴⁰ Clark et al.⁴⁵ indicated that resilient nurses were more engaged, showed greater satisfaction with patient care and workplace involvement, and were more able to manage organizational stressors. In contrast, organizational or social support for Greek nurses appears to be inadequate. Recent research shows high quit rates, job burnout, and turnover among Greek nurses.³¹ These findings underscore the necessity for leaders and managers to cultivate a culture of resilience and engagement, thereby enabling moral resilience to demonstrate its protective effect.⁴⁶

The nurses in the current study exhibited moderate levels of moral resilience and a moderate response to moral adversity despite operating for an extended period within a context characterized by limited organizational support and resources. Working conditions in Greek hospitals have been challenging for a long time, following a ten-year financial crisis that detrimentally impacted the number of nurses and the quality of care they provide, which has been reported as fair or poor.⁴⁷ Consequently, due to these nursing shortages, Greek nurses have experienced high levels of burnout and low levels of satisfaction with the quality of care they deliver—factors identified as sources of moral distress.^{48,49} These findings are alarming for nursing leaders in Greece and suggest that there are opportunities to adopt tailored strategies to address systemic and chronic organizational issues. Strategies might include strengthening trust through frequent town halls by leaders, weekly briefings and transparency in shifts,⁵⁰ ensuring nurses feel appreciated and valued, enhancing clear communication, providing access to well-being resources (cultivating mindfulness and practicing self-care)⁵¹ and ethics counseling (employee assistance program),⁵² and increasing the autonomy and authority of nursing leaders.^{16,25}

Limitations

Our study had several limitations. First, we conducted a cross-sectional study, and thus, we cannot infer a causal relationship between moral resilience, moral distress, and moral injury. Longitudinal studies could

further add significant knowledge. Second, we obtained a convenience sample of nurses in Greece, and, thus, our study suffers from selection bias. For instance, our sample included mainly females and their levels of moral resilience, moral distress, and moral injury could be different from those among males. Furthermore, in our sample almost eight out of ten nurses considered that they work in understaffed wards, and most of our nurses work in shifts. These work-related variables may have an impact on resilience by reducing it. On the other hand, understaffing and shift work may increase moral distress and injury. Thus, future studies with more representative sample nurses from different healthcare settings would reduce selection bias among studies. Third, although we used valid instruments to measure moral resilience, distress, and injury, information bias is probable in our study due to the self-nature of the questionnaires. Furthermore, information bias could be introduced in our study from the self-assessment of confounders such as working in understaffed wards since it was a subjective measurement. Finally, we eliminated several confounders in the relationship between moral resilience, moral distress, and moral injury, but several other variables can also act as confounders. Elimination of confounders in future studies will provide more valid results. For instance, we did not collect data on unit types and hospital types (public or private), and, thus, future studies could eliminate these confounders.

Conclusions

As reported in previous studies and corroborated by the present research, moral resilience plays a critical role in protecting nurses from moral distress and moral injury, even 4 years after the onset of the COVID-19 pandemic. Despite operating in an organizational context long suffered by conditions that exacerbate moral distress, Greek nurses have unexpectedly continued to demonstrate moderate levels of moral resilience. This resilience is notable given the numerous challenges, including chronic understaffing, limited resources, and insufficient organizational support, which have been prevalent in various healthcare settings worldwide. However, it is essential to recognize that sustaining this resilience requires proactive and continuous efforts from nurse leaders and policymakers. By adopting comprehensive, multi-level interventions that target broader cultural, organizational and systems factors, the healthcare system can better support nurses, ensuring their well-being and ability to provide high-quality care. Finally, we should recognize that our study suffers from several limitations such as confounding, selection bias and information bias. Moreover, our study investigated for first time the association between moral resilience, moral distress and moral injury in nurses in the post-COVID-19 era. Therefore, there is an urgent need for further studies in this research field to expand our knowledge.

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