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Cross-Sectional Study

Ethical Challenges and Stress of Conscience among Nurses in Palliative Care: A Cross-Sectional Study

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Abstract

Within healthcare settings, moral injury has become recognized as a significant ethical and psychosocial issue. Although palliative care nurses regularly face ethically challenging situations alongside continuous emotional burdens, empirical data regarding the severity of moral injury and its predicting variables in this population remain scarce. To address this gap, the current study aims to evaluate the extent of moral injury among palliative care nurses and identify its associated factors. A cross-sectional, descriptive, and correlational survey design was implemented. Using convenience sampling, palliative care nurses were recruited from palliative care departments across Anhui and Jiangsu provinces in China from December 2025 to February 2026. The subjects filled out a demographic/work-related survey, the Moral Injury Symptom Scale–Health Professional (MISS-HP), and the Emotional Labor Scale. Statistical analyses included t-tests/ANOVA, Pearson correlation, and stepwise multiple linear regression. Out of the 361 nurses invited, 349 returned valid questionnaires (96.7%). The average total score on the MISS-HP was 48.96 ± 17.35, which indicates comparatively high levels of moral injury among the sampled palliative care nurses. In the multivariable analysis (adjusted R^2 = 0.386), increased moral injury scores were significantly linked to being male, being unmarried, holding higher educational degrees, facing severe ethical conflicts more frequently over the prior year, perceiving lower support from supervisors/peers, and exhibiting higher levels of emotional labor (all $P < 0.05$). The results indicate that moral injury symptoms are relatively pronounced among palliative care nurses. A positive correlation was found between emotional labor and moral injury, indicating that greater emotional labor tends to correspond with more severe symptoms of moral injury. Additionally, demographic traits and occupational factors—specifically gender, marital status, academic attainment, the frequency of severe ethical dilemmas, and perceived organizational support—were significantly associated with moral injury. These outcomes underscore the need to strengthen organizational support and develop interventions to manage emotional labor, thereby alleviating moral injury and promoting nursing well-being.

Keywords: Palliative care, Moral injury, Emotional labor, Ethical dilemmas, Cross-sectional study

Introduction

Moral injury refers to the psychological, social, and spiritual distress that can manifest when individuals participate in, witness, or fail to prevent acts that violate deeply held ethical values [1, 2]. Far from being a temporary emotional disturbance, it is frequently marked by enduring feelings of guilt, shame, anger, broken trust, and a loss of meaning, and it can progress into spiritual crises and social withdrawal [3]. Recently, moral injury has received growing scrutiny in medicine due to the regularity of value-laden clinical options, conflicting professional duties, and systemic limitations encountered during practice [4-6].

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Palliative care is a specialized medical domain dedicated to patients with life-limiting conditions, focusing on maximizing comfort, maintaining dignity, and mitigating suffering during end-of-life phases [7]; however, this environment is inherently marked by severe emotional stress and recurring ethical conflicts. When managing dying patients, nursing staff witness the intense physical pain of patients and the psychological agony of relatives, which exacerbates both their emotional burden and moral struggles [8]. In decisions regarding end-of-life options [9], nurses must balance intricate trade-offs among honoring patient autonomy, addressing patients' and families' expectations, and maintaining their personal and professional moral standards [10]. For example, choices involving the titration of opioid analgesics, facilitating the withdrawal of life-sustaining treatments, or responding to demands for potentially non-beneficial interventions can clash with a nurse's moral framework and professional ideals, thereby elevating the vulnerability to moral injury [11, 12].

Prior research indicates that palliative care nurses frequently face feelings of guilt, powerlessness, and anxiety when dealing with patient mortality or when they perceive that optimal care cannot be delivered [13]. These responses not only jeopardize their psychological health but also foster emotional detachment, compassion fatigue, and professional burnout [14]. Over-extended periods, continuous empathic engagement paired with minimal control over clinical trajectories can create a sense of failure regarding symptom relief, thereby eroding the professional purpose and self-esteem of nursing staff [15]. This accumulating emotional strain can manifest as mental exhaustion, decreased occupational engagement, and diminished standards and consistency of care [16]; moreover, enduring emotional labor in environments filled with death, pain, and felt helplessness can provoke chronic psychological distress, ultimately impairing patient comfort and the overall efficacy of end-of-life care [17].

On the other hand, robust organizational backing and functional emotional regulation strategies can enhance a nurse's capacity to maintain a compassionate presence, navigate ethical dilemmas, and engage in therapeutic communication [18]. Such constructive emotional coping improves the quality of interactions among nurses, patients, and families, supports shared decision-making, and ultimately optimizes patient comfort and dignity, as well as family satisfaction, during end-of-life care [19]. Consequently, identifying and managing moral injury among palliative care nurses is vital not only for safeguarding clinicians' professional well-being but also for fostering healthcare environments that foster favorable experiences for patients and their families.

While moral conflict and occupational stress among healthcare practitioners have been extensively investigated [20], studies concentrating explicitly on moral injury within the palliative care nursing workforce remain limited. In comparison to nurses in alternative clinical specialties, those in palliative care function within exceptionally rigorous and emotionally taxing environments, regularly dealing with mortality, feelings of impotence, and intricate ethical problems [21]. Accordingly, exploring moral injury within this specific group carries notable theoretical and practical weight. Discerning the prevalence and identifying predictive variables of moral injury can provide an empirical framework for reducing psychological strain on nurses and for informing the design of tailored interventions and institutional support structures. Ultimately, these insights may enhance the quality of palliative care provision while bolstering nurses' job satisfaction and psychological well-being [22]. To address this gap, the current study aims to evaluate the extent of moral injury among palliative care nurses and identify its associated factors.

Materials and Methods

Design and participants

This descriptive, cross-sectional investigation took place from December 2025 to February 2026. Palliative care nurses operating within palliative care departments in Anhui and Jiangsu provinces were enrolled via convenience sampling.

The inclusion criteria required participants to: (1) possess a valid nursing license; (2) be actively employed in hospital-based palliative care units delivering inpatient palliative care, with a minimum of 1 year of professional experience. The exclusion criteria ruled out: (1) nurses undergoing clinical rotations or pursuing advanced training; (2) nurses currently on sick leave or maternity leave.

Sample size estimation was determined based on a ratio of 5–10 subjects per independent variable for the regression analysis [23]. Factoring in 18 potential predictors and accounting for a 20% invalid questionnaire rate, the projected final sample ranged from 113 to 223 palliative care nurses.

Measures

General information questionnaire

The general background survey was structured by the investigator following an evaluation of the pertinent literature [24] and aligned with the objectives of this research. It captured demographic and professional variables documented or hypothesized to relate to moral injury in nursing populations, including gender, age, marital status, education level, religious affiliation, years of experience in palliative care, professional title, hospital classification, annual frequency of palliative care training sessions, weekly volume of end-of-life patients

encountered, history of work-related moral dilemmas or ethical conflicts, history of occupational burnout or emotional exhaustion within the prior year, annual frequency of major ethical dilemmas encountered, perceived level of support from leaders and peers, and the weekly number of night shifts.

Moral injury symptom scale for healthcare professionals

The Moral Injury Symptom Scale for Healthcare Professionals (MISS-HP) was developed by Mantri *et al*. [25] by modifying the original military instrument for use in medical settings to evaluate moral injury symptoms among healthcare practitioners. The Cronbach's α coefficient for the original English validation was 0.75. The instrument comprises 10 items spanning 10 dimensions of moral injury manifestations: betrayal, guilt, shame, moral concern, loss of trust, loss of meaning, difficulty forgiving, self-condemnation, faith struggle, and loss of faith. Items 5, 6, 7, and 10 feature positive phrasing and thus require reverse scoring. Each item is evaluated using a 10-point scale spanning from 1 ("completely disagree") to 10 ("completely agree"), yielding a total score range of 10 to 100. Elevated cumulative scores reflect more severe symptoms of moral injury. A composite score of \ge 50 indicates substantial moral injury symptoms, primarily characterized by heightened experiences of guilt, shame, and grief, which can diminish well-being by reducing personal purpose and inner serenity [26]. Wang *et al*. [27] developed the Chinese adaptation of this instrument. The Chinese version demonstrated sound reliability and validity, yielding a Cronbach's α coefficient of 0.714 [27]. In this investigation, the Cronbach's α coefficient for the scale was 0.838.

Emotional labor scale

The Emotional Labor Scale was originally developed by Grandey [28] and subsequently translated and validated for use in Chinese nursing environments by Luo *et al*. [29]. This instrument assesses three distinct dimensions across 14 items: surface acting, deep acting, and emotional expression. Specifically, surface acting comprises 7 items and assesses the projection of emotions that are not genuinely felt; deep acting comprises 3 items and measures the alignment of internal feelings with professional emotional expectations; and emotional expression comprises 4 items and reflects the authentic display of workplace-appropriate emotions. Items are scored using a 5-point Likert scale, spanning from "strongly disagree" (1) to "strongly agree" (5). Cumulative scores range from 14 to 70, with higher values indicating greater intensity and frequency of emotional labor among respondents. The original validation reported Cronbach's α coefficients of 0.811 for the full scale, and 0.711, 0.826, and 0.872 for its respective subscales. In the current investigation, the overall Cronbach's α coefficient for the instrument was 0.892.

Data collection and quality control

Before initiating data collection, the primary researcher coordinated with the nursing directorates of the participating institutions to establish uniform guidelines regarding the study goals, eligibility criteria, and administrative workflows. Following institutional clearance, an electronic questionnaire link and QR code were distributed through official nursing administration channels to unit-specific nurse WeChat groups. Participation was entirely voluntary, with informed consent required on the opening page of the digital portal. To minimize missing data and prevent duplicate submissions, the survey was fully anonymous, all items were marked as mandatory, and each account, device, or IP address could submit only a single response. Data collection concluded once a full consecutive week passed without any new valid submissions. Two independent investigators evaluated and cross-verified the compiled dataset, discarding questionnaires that showed obvious response biases (e.g., uniform responses across all items), internal logical contradictions, or irregular completion times. Of the 361 distributed surveys, 349 valid responses were retained, yielding an effective response rate of 96.7%.

Data analysis

Statistical computations were performed using SPSS version 25.0. To verify the normality of the data distribution, multiple normality tests were applied, including the Kolmogorov-Smirnov and Shapiro-Wilk tests. The results demonstrated that the primary continuous measures (the cumulative MISS-HP score, the overall emotional labor score, and its subscales) followed a normal distribution. Categorical variables were presented as frequencies and percentages, while continuous variables were expressed as means and standard deviations. Discrepancies between groups for normally distributed continuous variables were analyzed using independent-samples t-tests or one-way analysis of variance (ANOVA), as appropriate. The association between moral injury and emotional labor was evaluated using Pearson's correlation analysis. Independent variables that demonstrated statistical significance in the univariate analyses ($P < 0.05$) were subsequently included in a stepwise multiple linear regression model to establish the predictors of moral injury. Statistical significance across all models was determined using a two-tailed P-value less than 0.05 [30].

Ethical consideration

The study protocol received formal approval from the Ethics Committee of Nanjing Drum Tower Hospital, affiliated with Nanjing University Medical School (Ethics Approval No.: 2024-853-02). This investigation was conducted in strict conformity with the ethical principles outlined in the Declaration of Helsinki, as well as all relevant institutional guidelines and regulations. All subjects provided digital informed consent via the online survey platform before participation.

Results and Discussion

The participating palliative care nurses had a mean age of 34.26 ± 8.15 years and an average of 4.23 ± 5.16 years of work experience within palliative care settings. The vast majority of the sample was female (93.3%). COMPREHENSIVE participant demographics and univariate analytical comparisons are detailed in **Table 1**.

Table 1. Participant characteristics and univariate comparisons of moral injury (n = 349). From: Moral injury and influencing factors among palliative care nurses: a cross-sectional study.

Characteristic	Group	P-value	Test statistic	MISS-HP score (Mean ± SD)	N (%)
Sex	Male	0.001	t = −3.534	62.15 ± 20.46	27 (7.7%)
	Female			47.85 ± 16.63	322 (92.3%)
Age category (years)	20–29	0.217	F = 1.491	47.60 ± 15.52	126 (36.1%)
	30–39			49.33 ± 16.44	141 (40.4%)
	40–49			47.74 ± 20.49	50 (14.3%)
	≥ 50			54.59 ± 21.91	32 (9.2%)
Marital status	Single	< 0.001	F = 10.221	54.21 ± 18.64	130 (37.2%)
	Married			45.68 ± 15.45	210 (60.2%)
	Divorced/Widowed			49.67 ± 22.94	9 (2.6%)
Educational qualification	Associate degree or lower	< 0.001	F = 7.895	51.37 ± 20.21	70 (20.1%)
	Bachelor's degree			47.18 ± 15.71	255 (73.1%)
	Master's degree or higher			60.79 ± 20.10	24 (6.9%)
Religious affiliation	Yes	0.04	t = −2.106	55.35 ± 21.83	43 (12.3%)
	No			48.06 ± 16.47	306 (87.7%)
Duration of work in palliative care	≤ 1 year	0.803	F = 0.331	48.59 ± 17.17	150 (43.0%)
	2–5 years			48.86 ± 16.87	122 (35.0%)
	6–10 years			48.57 ± 18.06	49 (14.0%)
	≥ 11 years			52.07 ± 19.66	28 (8.0%)
Professional rank	Junior registered nurse	0.202	F = 1.606	51.42 ± 19.63	91 (26.1%)
	Intermediate/senior nurse			47.32 ± 16.47	152 (43.6%)
	Nurse-in-charge or higher			49.20 ± 16.37	106 (30.4%)
Hospital classification	Tertiary Grade A hospital	< 0.001	F = 11.040	48.30 ± 16.42	182 (52.1%)
	Secondary Grade A hospital			57.36 ± 23.10	64 (18.3%)
	Other healthcare institutions			44.91 ± 12.54	103 (29.5%)
Annual palliative care training frequency	Never	0.998	F = 0.013	49.18 ± 18.25	74 (21.2%)
	1–2 sessions			49.00 ± 14.83	120 (34.4%)
	3–5 sessions			49.03 ± 18.97	74 (21.2%)
	≥ 6 sessions			48.64 ± 18.70	81 (23.2%)
Number of end-of-life patients cared for weekly	0–3	< 0.001	F = 7.301	46.40 ± 14.42	249 (71.3%)
	4–6			53.96 ± 21.70	49 (14.0%)
	7–10			59.50 ± 22.30	24 (6.9%)
	≥ 11			54.15 ± 22.24	27 (7.7%)
Experience of ethical conflicts in the workplace	Never	< 0.001	F = 8.868	45.22 ± 18.73	142 (40.7%)

	Occasionally			48.82 ± 12.46	144 (41.3%)
	Frequently			55.23 ± 20.19	40 (11.5%)
	Very frequently			62.04 ± 20.99	23 (6.6%)
Burnout/Emotional exhaustion during the previous year	None	< 0.001	F = 7.326	43.20 ± 13.29	91 (26.1%)
	Mild			49.09 ± 15.98	171 (49.0%)
	Moderate			52.98 ± 21.25	49 (14.0%)
	Severe			57.00 ± 21.74	38 (10.9%)
Major ethical dilemmas encountered in the previous year	0	< 0.001	F = 15.587	44.10 ± 13.76	197 (56.4%)
	1–2			52.19 ± 16.36	85 (24.4%)
	3–5			58.81 ± 20.63	37 (10.6%)
	≥ 6			59.57 ± 24.44	30 (8.6%)
Perceived support from supervisors and colleagues	Very high	< 0.001	F = 6.982	46.44 ± 16.55	86 (24.6%)
	High			47.39 ± 13.60	122 (35.0%)
	Moderate			47.35 ± 18.13	74 (21.2%)
	Low			49.11 ± 20.17	27 (7.7%)
	Very low			62.02 ± 20.66	40 (11.5%)
Number of night shifts per week	0	0.04	F = 3.239	47.21 ± 14.96	112 (32.1%)
	1–2			48.29 ± 17.42	173 (49.6%)
	3–4			53.81 ± 20.23	64 (18.3%)

Note: The test statistic is expressed as t for two-group comparisons and F for ANOVA.

The mean composite score on the Moral Injury Symptom Scale–Health Professional (MISS-HP) was 48.96 ± 17.35, indicating a relatively high level of moral injury symptoms. The mean cumulative score for the Emotional Labor Scale was 45.21 ± 8.84 **(Table 2)**.

Table 2. Scores on moral injury and emotional labor scales (n = 349). From: Moral injury and influencing factors among palliative care nurses: a cross-sectional study.

Measure	Number of items	Average item score (Mean ± SD)	Overall score (Mean ± SD)
Moral injury symptoms scale–health professionals (MISS-HP)	10	4.90 ± 1.73	48.96 ± 17.35
Emotional labor scale (Overall)	14	3.23 ± 0.63	45.21 ± 8.84
Emotional labor – Surface acting dimension	7	2.88 ± 0.85	20.19 ± 5.95
Emotional labor – Deep acting dimension	3	3.64 ± 0.93	10.93 ± 2.79
Emotional labor – Emotional expression dimension	4	3.52 ± 0.85	14.10 ± 3.39

Pearson correlation analyses demonstrated that overall emotional labor was positively associated with moral injury ($r = 0.462$, $P < 0.001$). Furthermore, all three individual emotional labor dimensions exhibited significant positive correlations with moral injury (all $P < 0.05$), with surface acting displaying the most pronounced association ($r = 0.545$) **(Table 3)**.

Table 3. Correlations between emotional labor and moral injury (n = 349). From: Moral injury and influencing factors among palliative care nurses: a cross-sectional study.

Emotional labor dimension	Correlation coefficient (r)	Mean ± SD
Overall emotional labor score	0.462*	45.21 ± 8.84
Surface acting component	0.545*	20.19 ± 5.95
Deep acting component	0.127*	10.93 ± 2.79

Emotional expression component	0.145*	14.10 ± 3.39

Note: All values represent Pearson's r.
*P < 0.05

Variables demonstrating significance in the univariate screenings (P < 0.05) were entered into a stepwise multiple linear regression model. Biological sex, marital status, academic qualification, the annual frequency of major ethical conflicts, perceived leader/peer support, and emotional labor remained significant independent predictors (all P < 0.05). Conversely, religious beliefs and hospital classification/type were excluded from the final model, as they lost statistical significance after controlling for concurrent covariates. Specifically, higher moral injury scores were significantly associated with being male (B = 6.851, P = 0.017), being unmarried (B = 1.832, P = 0.020), holding a higher education level (B = 8.434, P = 0.005), encountering major ethical dilemmas more frequently within the past year (B = 4.835, P < 0.001), perceiving lower levels of support from leaders/colleagues (B = 1.236, P = 0.047), and reporting higher emotional labor (B = 0.918, P < 0.001). The final regression model accounted for 39.7% of the total variance observed in moral injury scores (R^2 = 0.397; adjusted R^2 = 0.386; F = 37.457; P < 0.001) **(Table 4)**.

Table 4. Stepwise multiple linear regression for moral injury (n = 349). From: Moral injury and influencing factors among palliative care nurses: a cross-sectional study.

Independent variable	P-value	t-value	Standardized coefficient (β)	Standard error (SE)	Unstandardized coefficient (B)
Intercept	0.93	−0.088	—	3.932	−0.346
Sex	0.017*	2.405	0.106	2.848	6.851
Marital status	0.02*	2.334	0.102	0.785	1.832
Educational attainment	0.005**	2.834	0.123	2.976	8.434
Number of major ethical dilemmas experienced during the previous year	< 0.001**	5.869	0.269	0.824	4.835
Perceived support from supervisors and colleagues	0.047*	1.996	0.090	0.619	1.236
Total emotional labor score	< 0.001**	11.002	0.468	0.083	0.918

Model fit parameters: R^2 = 0.397; adjusted R^2 = 0.386; F = 37.457; P < 0.001.
*P < 0.05; * *P < 0.01

The results of this study demonstrated that moral injury scores among palliative care nurses were relatively pronounced. The mean MISS-HP score identified in this research aligns with findings previously reported for oncology and emergency department nurses [31, 32], indicating that moral injury represents a substantial concern within the palliative care nursing workforce. This similarity likely reflects the pervasive nature of moral injury among nursing professionals who operate in highly emotionally demanding and ethically intricate clinical environments. Within palliative care settings, nurses are continuously engaged in direct bedside care, symptom control, and communication with patients and relatives; they are susceptible to moral injury when they identify the optimal path for a patient's welfare but face barriers due to institutional regulations, resource limitations, or clinical decisions mandated by other parties [33]. These experiences can compromise both the well-being of nursing staff and the quality of clinical care: unmitigated moral distress may decrease emotional availability, impede therapeutic communication, and limit compassionate assistance.

On the other hand, organizational backing, ethics consultations, and collaborative team communication can help nurses maintain psychological resilience and professional engagement. Bolstering these system capabilities can maximize patient comfort, ensure uniform symptom management, and promote dignified end-of-life care. At the same time, families benefit from more transparent communication, clearer understanding of care trajectories, enhanced emotional reassurance, and reduced anxiety or guilt [34]. Incorporating moral injury assessments into institutional risk management frameworks—encompassing screening, early detection, ethical and bereavement resources, clinical supervision, and communication workshops—may therefore cultivate compassionate, patient-centered care and foster a more supportive, well-informed environment for patients and their relatives.

The data from this investigation also revealed that biological sex was linked to moral injury, with male nurses exhibiting higher levels of moral injury symptoms compared to their female peers. This outcome aligns with prospective literature suggesting that gender variations can shape psychological responses to occupational stress and ethical challenges [35]. Male clinicians practicing in palliative care may experience heightened pressures linked to professional identity, societal expectations, and workplace integration. Furthermore, traditional masculine norms often encourage emotional suppression and avoidance coping mechanisms over the utilization of social or emotional support networks [36]. Chronic emotional suppression can intensify internal friction and psychological strain, thereby increasing susceptibility to moral injury [37]. Conversely, female nurses may

demonstrate greater attunement to others' needs and emotional states, thereby facilitating moral resonance. When navigating ethical conflicts, female practitioners frequently prioritize interpersonal bonds and relational engagement, potentially enhancing their capacity to manage moral struggles in clinical environments and mitigating the risk of moral injury [38]. Nursing administrators should acknowledge these gender-specific variances, deploy targeted support systems for male nursing staff, and foster inclusive involvement in ethical decision-making by challenging stereotypes, reinforcing professional identity, and cultivating supportive team dynamics.

This study established that unmarried status and lower perceived support from supervisors and colleagues were associated with heightened moral injury symptoms, echoing findings reported by Wang *et al*. [39]. Unmarried nurses may possess more restricted social and emotional support networks, which can reduce the psychological reserves available when navigating ethical dilemmas and repeated exposure to patient mortality. Consequently, they may be more vulnerable to enduring negative affect and self-blame. Additionally, end-of-life care is frequently complicated by resource shortages and conflicting clinical choices. When nurses are deprived of emotional and practical support from peers, administrators, and healthcare institutions, resolving moral dilemmas through collaborative communication, ethics consultations, or workload modification becomes more challenging, thereby escalating the risk of moral injury [40]. Accordingly, nursing leadership should reinforce a supportive culture within palliative care teams and establish transparent, psychologically safe workplaces that encourage ethical discourse and emotional expression.

The findings demonstrated that moral injury scores peaked among clinicians holding a master's degree or higher, a pattern consistent with the observations of Cao *et al*. [41]. A plausible explanation is that postgraduate nursing curricula place substantial emphasis on evidence-based reasoning, ethical reflection, and research methodologies, thereby instilling elevated benchmarks for professional values such as care quality, dignity preservation, and humanistic practice [42]. However, upon entering frontline palliative care units, these professionals frequently operate within environments constrained by limited resources, procedural mandates, diverging family expectations, and clinical ambiguity regarding end-of-life choices [43]. Furthermore, graduate-level nursing programs often prioritize theoretical knowledge and research proficiency over clinical practical training. Consequently, when encountering highly intricate scenarios involving communication, conflict resolution, and crisis management in palliative settings, postgraduate-educated nurses may experience a disconnect between their academic preparation and practical role requirements [44]. To address this, nursing administrators could design structured competency development pathways for highly educated nursing staff, utilizing mentorship frameworks, scenario-based case analyses, and advanced communication training to sharpen practical skills in palliative care, improve interdisciplinary coordination and conflict management, and enhance professional self-worth through participation in clinical quality improvement and process optimization.

The frequency of major ethical conflicts encountered over the preceding year was positively associated with moral injury, suggesting a cumulative effect of repeated ethical challenges. Within palliative care environments, nurses regularly confront ethically sensitive situations, including balancing symptom relief with palliative sedation, managing disagreements among family members over goals of care, and navigating situations in which patients cannot clearly articulate their preferences. In line with the "moral residue" paradigm [45], unresolved ethical conflicts can leave enduring emotional imprints that compound over time. When these situations recur without sufficient institutional support or opportunities for reflection, they can gradually erode a nurse's psychological resilience and foster moral injury. Healthcare facilities should therefore establish systematic frameworks for identifying and responding to high-impact ethical events, including structured debriefing sessions, ethics consultation services, and opportunities for collective team reflection following challenging clinical cases.

Emotional labor was significantly linked to moral injury in the current study. The mean total emotional labor score was 45.21 ± 8.84, with an item average of 3.23 ± 0.63, indicating that palliative care nurses undertake a substantial emotional labor burden. Among its three dimensions, deep acting and the expression of naturally felt emotions yielded higher scores than surface acting, suggesting that palliative care nurses rely more on internal emotional regulation and authentic emotional expression than on superficial displays. This aligns with the intrinsic nature of palliative care, in which clinicians are required not only to regulate their own emotions but also to provide continuous emotional reassurance to patients and families [46]. A corresponding pattern was identified by Pehlivan Sarıbudak [47], who noted that the energy expended by palliative care nurses to address patient needs while managing their own negative emotions often exceeds the emotional strain of merely suppressing authentic feelings. If nurses deliver care rooted in genuine empathy and professional purpose, and if healthcare institutions provide organizational resources—such as specialized training, ethical consultation, bereavement debriefings, and protected time off—it can help sustain their emotional caregiving capacity and therapeutic engagement [48]. This, in turn, can foster improved symptom management and more transparent communication with relatives, enabling nurses to offer targeted psychological comfort and emotional support while guiding families to better comprehend and engage in end-of-life decision-making [49]. Consequently, addressing moral injury and emotional labor among nursing staff may not only reduce their psychological distress but also enhance patient comfort, family satisfaction, and the overall quality of end-of-life care.

This investigation has several limitations. First, due to its cross-sectional design, definitive causal relationships among the analyzed variables cannot be established. Second, data collection relied on self-reported questionnaires, which introduces the potential for reporting and social desirability biases. Third, participants were sampled from a restricted geographic area, which may limit the generalizability of the findings to palliative care nurses in other regions. Consequently, caution should be exercised when extrapolating these results to alternative cultural or healthcare contexts. Future research should examine a broader range of organizational and psychological determinants and design targeted interventions to mitigate moral injury within the palliative care nursing workforce.

Conclusion

In this study, palliative care nurses' moral injury scores were found to be relatively high. Moral injury demonstrated significant associations with demographic traits such as gender, marital status, and educational attainment, as well as emotional factors—most notably emotional labor, the annual frequency of major ethical dilemmas, and perceived support from leadership and colleagues. Specifically, greater emotional labor and more frequent exposure to major ethical conflicts were associated with more severe moral injury symptoms. In contrast, higher perceived support from supervisors and peers was associated with lower levels of moral injury. Nurses facing continuous demands for emotional regulation while caring for distressed patients and their families exhibited greater vulnerability to moral injury. This outcome suggests that emotional labor may fuel moral injury by exhausting psychological resources and heightening sensitivity to ethically challenging clinical scenarios. Concurrently, deficient support from leaders and colleagues may compromise a nurse's ability to cope with emotional strain and moral conflict, thereby exacerbating moral injury. Nursing leadership should recognize moral injury as a critical ethical and psychological challenge in palliative care, institute routine screening protocols for both moral injury and emotional strain, and deliver tailored interventions via peer-support networks, ethical supervision, and psychological counseling to alleviate moral distress, strengthen emotional resilience, and prevent professional exhaustion.

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Conflict of interest: None

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Ethics statement: This study was approved by the Ethics Committee of Nanjing Drum Tower Hospital, affiliated with Nanjing University Medical School (Ethics Approval No. 2024-853-02). Our research adhered strictly to the ethical principles outlined in the Declaration of Helsinki, ensuring compliance with all pertinent guidelines and regulations. Before their participation, all individuals involved in the study provided their informed consent.

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