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Determinants of Moral Distress (MD) amongNurses: An Integrative Review of Pre-and Intra-pandemic Evidence

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ABSTRACT

Background: Moral distress in nursing occurs when nurses recognize the ethically appropriate action, but are prevented from carrying it out due to external or institutional barriers. It has been associated with negative outcomes for nurses, healthcare organizations, and patient care across diverse clinical settings. ***Purpose*****:** This integrative review aimed to synthesize existing literature on moral distress among nurses and to identify individual, clinical, and organizational factors contributing to its occurrence, intensity, and frequency. ***Methods*****:** An integrative review was conducted following PRISMA 2020 guidance. Studies published between 2012 and 2022 were searched in two electronic databases, PubMed and CINAHL. After screening 2,294 records and assessing 41 full-text articles for eligibility, 10 empirical studies were included in the final review. ***Results*****:** The review included 10 studies conducted in the United States, Iran, Belgium, and Lithuania. Five studies used the Moral Distress Scale-Revised, while others used original, modified, or COVID-19-specific MD measures. Reported MD frequency and intensity varied across studies because of differences in clinical settings, measurement tools, and scoring scales. Higher MD was generally reported in high-acuity settings, including intensive care, emergency, oncology, neonatal intensive care, and COVID-19 units. MD was associated with age, years of experience, employment status, autonomy, workload, patient-related ethical challenges, job satisfaction, and turnover intention. ***Conclusion*****:** MD remains a prevalent and multifaceted phenomenon in nursing practice. Variations in its experience highlight the influence of contextual and organizational factors. Addressing MD requires comprehensive strategies at the clinical, educational, and managerial levels. ***Implications for Nursing*****:** Findings underscore the need for targeted interventions, supportive ethical climates, and educational initiatives to reduce MD and promote nurses' moral resilience and well-being.

Keywords: Moral distress, Nurses, Ethical conflict, Moral resilience, Ethical climate, Compassion fatigue, Intensity, Frequency, Integrative review.

What does this paper add?

1. This integrative review synthesizes evidence on the intensity, frequency, and determinants of MD among nurses across different clinical settings.
2. It highlights inconsistencies in measurement and reporting of MD and emphasizes the need for standardized assessment tools and organizational interventions.

Introduction

Ethical decision-making plays a central role in nursing practice and the nurse-patient relationship, as nurses frequently face situations requiring complex

moral judgments (Nikbakht Nasrabadi et al., 2021). Nurses may have unique work requirements that may contradict with their morals and values (Austin et al., 2005), due to the exceptional patient's condition, family or other physicians' and nurses' perceptions (Oh & Gastmans, 2015). MD was originally conceptualized by Jameton to describe situations in which nurses recognize the ethically appropriate action but are prevented from acting due to institutional constraints (Jameton, 1993).

MD has increasingly been recognized as a major ethical and occupational concern in nursing because of its association with adverse outcomes at individual, organizational, and patient-care levels. Evidence suggests that nurses experiencing higher levels of MD are more likely to report emotional exhaustion, burnout, psychological distress, reduced job satisfaction, and intention to leave their current position or the nursing profession. Recent evidence also suggests that moral resilience may serve as a protective factor by reducing job burnout and turnover intention among nurses in the post-COVID-19 context. MD may also affect patient care indirectly by reducing nurses' engagement, increasing avoidance behaviors, weakening communication within healthcare teams, reducing continuity of care, limiting nurses' participation in ethical decision-making, and contributing to workforce instability. These consequences may negatively influence the quality and safety of patient care (Epstein et al., 2019; Galanis et al., 2024; Lake et al., 2022).

Recent evidence further indicates that moral distress remains a significant concern among hospital nurses. In a recent study, Moisoglou et al. (2024) found that nurses experienced varying levels of moral distress, and higher moral distress was associated with greater consideration of leaving their job or the nursing profession. These findings support the need for continued examination of the determinants of moral distress and the development of strategies that strengthen ethical support and moral resilience among nurses.

Subsequent definitions broadened this concept to include psychological and emotional responses, such as frustration, anxiety, and moral discomfort when ethical action cannot be implemented (Wilkinson, 1987). Jameton (1993) introduced the concepts of initial distress and reactive distress. Initial distress encompasses feelings as anger, frustration and anxiety secondary to institutional problems and value conflicts. On the other hand, reactive distress occurs when people do not act on their initial distress (Jameton, 1993). MD has a negative impact on nurses' well-being, job security and patient care. The experience of MD has been linked to a range of psychological and physical outcomes, including emotional exhaustion, sleep disturbances, and reduced well-being. (Lerkiatbundit & Borry, 2009).

MD is widely recognized as an important ethical issue in nursing practice and has been extensively examined across different clinical settings and healthcare systems (Hamric et al., 2012; Epstein et al., 2019; Lake et al., 2022).

Research put forward that MD faced by health professionals is significant and growing. The concept is widely studied and reported in many countries, including Iran (Tajalli et al. 2021), Japan (Fujii et al., 2021), Jordan (Hamaideh, 2014), Malawi (Maluwa et al., 2012), New Zealand (Woods et al., 2015) and many European countries (Dyo et al., 2016). MD was reported among oncology, medical-surgical, mental health and pediatric intensive care nurses (Sarkoohijabalbarezi et al., 2017). It is of paramount importance to measure and quantify MD, so that measures can be taken to minimize it. Based on Jameton's (1993) conceptualizen framework of MD in nursing, (MDS) was first developed by Corley et al. (2001). with 32 items. A modified version (MDS-R) was produced in 2005 consisting of 38 items, (Corley et al., 2005), then a shortened form was produced by Hamric et al. (2012) involving 21 items assessing the frequency and intensity of MD designed to measure MD among health care professionals, as well as among different disciplines.

During the emergence of COVID-19 pandemic, patients, families, leaders and nurses experienced new COVID-19-related obligations. Morley et al. (2020) reported that 4 out of 5 COVID-19 treatment room nurses suffered MD. Due to the COVID-19 pandemic as a new disease and paucity of data in the literature, nurses' experience with COVID-19 patients is limited. The pandemic economic effects, frequent testing and PPE restrictions, school closings and social separation culminated in an extreme stressor (Meese et al., 2021).

In summary, MD has been explored utilizing various methodologies in different nursing settings. The results showed MD as an important phenomenon that can affect several dimensions. This review will analyze the research studies on MD among nurses, its causes and effects. It will also consider nurses' MD before and after the COVID-19 pandemic.

Aim

This integrative review aims to synthesize the literature on nurses' MD. The specific objectives are: (a) To determine the frequency and severity of MD among nurses, (b) To explore the causes and consequences of MD among nurses, (c) To identify factors and socio-demographic variables associated with MD and finally (d) To analyze MD-related factors in nurses during the COVID-19 pandemic.

Methods

Searching Strategy

This integrative review was reported in accordance with the EQUATOR Network checklist, the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 checklist, which guided the reporting of study identification, screening, eligibility, and inclusion processes.

The review examined the frequency and severity of (MD) and related factors among nurses by analyzing articles published between 2012 and 2022. Relevant studies were retrieved from PubMed and CINAHL using the following keywords: "MD", "nurses", "intensity and frequency", "ethical dilemma", "ethical conflict", and "moral conflict". Since COVID-19 has significantly affected global lifestyle and mental well-being, studies conducted during the COVID-19 outbreak were analyzed separately to better understand its impact on MD.

Studies were included if they focused on nurses, examined MD, and were published in English between 2012 and 2022. Studies involving other healthcare professionals, non-empirical designs, or lacking full text were excluded.

In the first search, duplicates were removed after being checked by two reviewers and then the two reviewers independently screened the articles' titles and abstracts based on main objectives. Articles that were not relevant were excluded.

After that, the two reviewers assessed 41 full-text articles for eligibility, and the reference lists of the included studies were manually searched to identify additional eligible articles. The final number of included studies in the review was 10 articles. Refer to the PRISMA flow diagram for details (Figure 1).

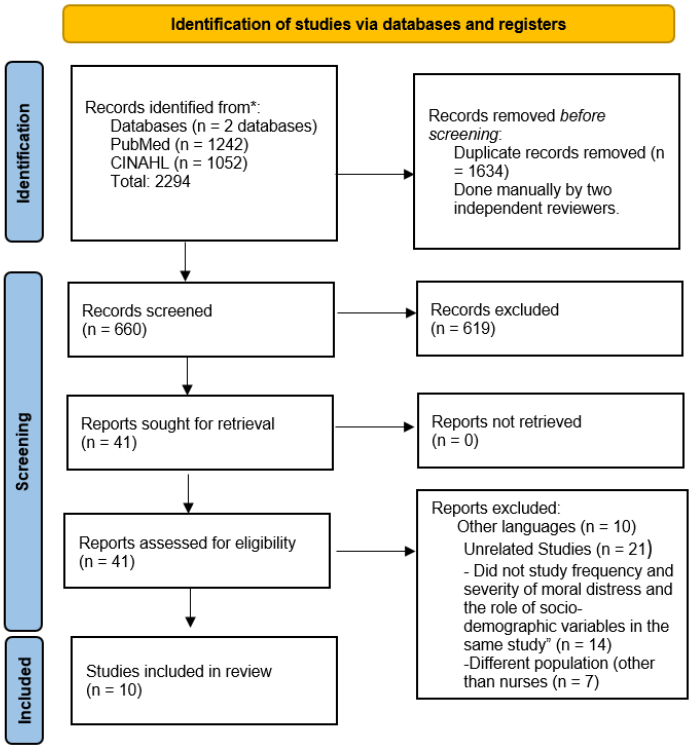

Figure 1. PRISMA flow diagram

Quality Appraisal

Two reviewers independently examined the articles to reduce bias. Ten studies underwent quality appraisal. Since the included articles used different

methodologies, they were examined using the tool developed by Hawker et al. (2002), who created a tool that enabled the systematic evaluation of methodologically diverse studies using the title, abstract and structure, and can be adapted for use with diverse data and across disciplines. Although more recent quality appraisal tools, such as the Joanna Briggs Institute (JBI), critical appraisal checklists are available. The Hawker et al. tool was selected, because it permits consistent appraisal across studies with diverse methodological designs. This choice was considered appropriate for the integrative nature of the review; however, the use of an older appraisal tool is acknowledged as a methodological limitation.

The data extraction sheet examined nine components in details: title and abstract, introduction and aims, methods and data, sampling, data analysis, ethics and bias, results, transferability or generalizability and implications and usefulness. Each item was graded on a scale from one (very poor) to four (good), giving articles scores ranging from 9 to 36. Scores below 18 were judged poor or very poor quality (Hawker et al,.2002). Articles appraised in this literature review scored above 30 and most of them scored 33-35.

Data Abstraction and Synthesis

Data was extracted into standard data-extraction forms including author's name (authors' names), year of publication, aim of the study, sample size, study design, place of study, main outcome measures, main results and the characteristics of participants.

Results

This review included 10 studies, including three studies from the US, five studies from Iran, one study from Belgium and one study from Lithuania. All studies included only nurses who worked in intensive or critical care units, hospitals, non-critical care units, oncology, psychiatric and academic medical facilities. Please refer to Table 1 and Table 2 for details on the characteristics of included studies and MD scores.

Table 1. Characteristics of included studies

Author(s), Year of Publication	Aim of the study	Country of the study	Sample size	Study design
Ameri, Safavibayatneed and Kavousi, 2016	To evaluate the intensity and frequency of MD and to determine the clinical situations leading to MD in oncology units.	Iran	148	Descriptive study
Piers et al., 2012	To examine MD in geriatric nursing care and to identify factors related to MD.	Belgium	222	Descriptive, cross-sectional survey
Laurs et al., 2020	To describe the level of MD experienced by nurses, situations that most often caused MD, and the intentions of the nurses to leave the profession.	Lithuania	612	Descriptive, cross-sectional, correlational design
Saleh et al., 2019	To explore MD and compassion fatigue in nurses of neonatal intensive care unit.	Iran	172	Descriptive correlational study
Dyo, Kalowes and Devries, 2016	To assess MD intensity and frequency in adult/pediatric nurses in critical care and non-critical care units, and to explore the relationships of nurse characteristics and MD with intention to leave.	USA	279	Descriptive, correlational design
Hatamizadeh et al., 2019	To explore the health care reforms as implications on nurse's MD, their perception of the respect of patient rights, satisfaction and turnover intention.	Iran	276	Cross-sectional correlational study
De Villers and DeVon, 2013	To explore MD and avoidance behavior in nurses working in critical care and noncritical care units.	USA	96	Descriptive, cross-sectional study
Abdolmaleki *et al.*, 2019	To examine the relationship between autonomy and MD in emergency nurses.	Iran	173	Descriptive correlational study
Lake et al., 2022	To explore factors associated with nurses' MD during the first COVID-19 surge among in academic medical centers.	USA	307	Cross-sectional, correlational design
Pooresmaeil & Aghamohammadi, 2021	To determine MD and its related factors among nurses working in the Covid-19 wards.	Iran	159	Cross-sectional descriptive study

Table 2. Moral distress scores and sample characteristics

Author(s), Year of Publication	Main Outcome Measures			Tool/ scale used/No. of items	Main Results
	Frequency (Mean ± SD)	Intensity (Mean ± SD)	Demographic Characteristics		
Ameri, Safavibayatneed and Kavousi, 2016	2.13 ± 0.44	2.08 ± 0.36	131 females, 17 males, average age 32.5 years	MDS - Revised MDS-R 0-4 scale	• Most nurses had high to moderate scores of MD. • Only years of experience in oncology unit was positively correlated with composite scores (p = 0.01, r = 0.24) • There was a significant difference between acute and chronic geriatric settings in overall MD frequency scores.
Piers et al., 2012	1.05 ± 0.65	2.26 ± 1.17	87 females, 13 males, nurses providing geriatric care	MDS-R 0-4 scale (18 items)	• Working in an acute geriatric care setting; as compared with the chronic geriatric care setting; was associated with increased MD. • Lack of involvement in decision making and lack of ethical debate were associated with elevated MD.
Laurs et al., 2020	1.09 ± 0.85	1.02	612 nurses, average age 45.8 years, average experience : 25 years	MDS-R 0-4 scale (21 items)	• The correlation between MD frequency and intensity was significant (p < .05). • Age differences are statistically significant (p < .05) (Younger nurses were more distressed than older nurses). • Nurses who had high MD levels were three times more likely to consider leaving their position compared with respondents with a moderate or low MD levels (p < .05).
Saleh et al., 2019	2.01± 0.62	3.11± 0.89	172 nurses working in the neonatal intensive care units	Corley's MDS - 30 items questionnaire 0-5	• There was no significant difference between single and married subjects in terms of the frequency and intensity of MD. • Significant correlation was found between age, nursing experience and work experience in NICU with compassion fatigue. Compassion fatigue has a significant positive correlation with the intensity of MD.
Dyo, Kalowes and Devries, 2016	1.6 ± 0.11	2.5 ± 0.19	92.8% females, average age 43.6 years 22% have 5-10 years of experience, 60% with more than 10 years of experience	38-item version of MDS 0-6 scale	• MD frequency showed a positive relationship with the intention to leave a position of employment. • Critical care nurses had the highest levels of MD intensity and frequency

Author(s), Year of Publication	Main Outcome Measures			Tool/ scale used/No. of items	Main Results
	Frequency (Mean ± SD)	Intensity (Mean ± SD)	Demographic Characteristics		
Hatamizadeh et al., 2019	40.32 ± 10.80	66.56 ± 12.54	223 females, 53 males. Average age 30.93 years. The mean years of experience was 8.93	Corley's MDS (24 items version) 0-4 scale	compared to non-critical care specialties. • Males had higher mean scores for MD intensity and frequency. This was statistically significant only when comparing moderate to high MD frequency scores by gender (p = 0.001). • The correlation between MD intensity (r = 0.626, p < 0.001) and frequency (r = 0.701, p < 0.001) was positive with turnover intention. • MD was significantly correlated to poor respect for patient rights, poor job satisfaction and income satisfaction and was a major predictor of turnover intention.
De Villers and DeVon, 2013	Critical care nurses (CCNs) 85.71 ± 23.42 nCCN 79.86 ± 20.37	CCNs 143.99±57.4 nCCNs 129.21 ± 54.4	86 females, 7 males, average age 41 years. 68 critical care nurses, 28 non-critical care nurses.	MDS (38 items version) 0-6 scale	• Although the mean scores of MD was higher for CCN's than nCCNs, the difference was not statistically significant. • Small positive correlation between MD and avoidance behavior. • Years of nursing experience were not positively correlated with MD scores.
Abdolmaleki et al., 2019	49.32 ± 16.8	47.8 ± 14.08	52.6% male, 47.4% female nurses. 58.2% above 30 years, 58.4% married, 61.8% with an experience of 1 to 5 years in ER nursing	MDS-R (21 item version) 0-6 scale	• A statistically significant negative relationship was reported between professional autonomy and the frequency of MD (p = 0.018). • Age had a negative and significant correlation with the frequency and intensity of MD. • Lack of autonomy hinders functioning effectively and efficiently in practice and even can produce MD.
Lake et al., 2022	1.8 ± 0.7	1.9 ± 0.6	8.69 ± 6.8 average years of experience, working in acute care 41%, adult ICU 24% and ED 24%	COVID-19 MDS (COVID-MDS) 27 items 0-3	• Nurses reported a higher frequency of experiencing COVID-19-specific morally distressing situations compared with non-COVID-19 situations. • The two demographic control variables; years of experience and whether the nurse worked in the ICU; were both significantly related to MD.

Author(s), Year of Publication	Main Outcome Measures			Tool/ scale used/No. of items	Main Results
	Frequency (Mean ± SD)	Intensity (Mean ± SD)	Demographic Characteristics		
Pooresmaeil & Aghamohammadi, 2021	52.28± 5.24	51.54 ±5.86	90.5% nurses, 48.42% had permanent employment, average age 31±5.7 years; 83.6% female,56% married, mean years of experience 8.35±5.6	Corley's MDS 21 items 0-5 scale	• Moderate level of MD in the both dimensions; intensity and frequency. • A significant relationship between the intensity and frequency of MD with the type of nurses' employment ($p < 0.05$). • A significant relationship was observed between the nurse's position and the frequency (P = 0.04), and between the nurse's work experience and the intensity of MD (P = 0.02).

SD: Standard Deviation; MDS: Moral Distress Scale; CCN: Critical Care Nurses, nCCN: Non-critical care nurses.

(MDS) Version Used in the Studies

Five out of ten studies have used MDS-R version (Abdolmaleki et al., 2019; Ameri et al., 2016; Laurs et al., 2020; Piers et al., 2012; Pooresmaeil & Aghamohammadi, 2021). The MDS-R is a 21-item tool used to evaluate both frequency and intensity of MD using a Likert-type scale, with variations across studies depending on the version used.

The study by Saleh et al. (2019) used the MD survey first developed by Corley et al. (2001), that is made up of 30 items measuring the frequency and intensity of MD on a five-point Likert scale. Some studies applied the original or extended versions of the MDS, reflecting differences in measurement approaches across the literature (Dyo et al., 2016). Finally, During the COVID-19 pandemic, the MDS was adapted to include items specific to pandemic-related ethical challenges alongside the standard measure of MD (Cramer et al., 2022; Lake et al., 2022).

MD Intensity and Frequency

By reviewing the articles, reported levels of MD varied considerably across studies in terms of both frequency and intensity.

Piers et al. (2012) reported low MD frequency scores and moderate intensity scores among nurses using the MDS-R 0-4 scale, with mean frequency of 1.05 ± 0.65 and mean intensity of 2.26 ± 1.17.

Dyo et al. (2016) reported low MD frequency and moderate MD intensity using a 0-6 MDS scale, with mean frequency of 1.6 ± 0.11 and mean intensity of 2.5 ± 0.19.

Saleh et al. (2019) reported mean MD frequency of 2.01 ± 0.62 and mean MD intensity of 3.11 ± 0.89 using Corley's MDS 0-5 scale, indicating average frequency and high intensity levels.

Hatamizadeh et al. (2019) and Pooresmaeil & Aghamohammadi (2021) found that the correlation between MD intensity and frequency was positive. Ameri et al. (2016) reported that most nurses had moderate to high scores of MD with a mean score of 2.13 for frequency and 2.08 for intensity. During COVID 19 pandemic, higher levels of MD were consistently observed among intensive care nurses compared with other clinical settings according to Lake et al. (2022). In addition, nurses reported more COVID-19 specific morally distressing situations and found them moderately distressing than non-COVID-19 situations. Pooresmaeil & Aghamohammadi (2021) reported that the majority of nurses working in COVID-19 wards experienced moderate MD frequency and all had moderate MD intensity.

Socio-demographic Factors

Socio-demographic variables may be associated with the levels of MD. Concerning the association between age and MD, Laurs et al. (2020) and Abdolmaleki et al. (2019) have reported that age is negatively correlated with MD, in which older nurses had lower MD than younger nurses; however, Pooresmaeil & Aghamohammadi (2021) revealed that age was not significantly correlated with either MD frequency or MD intensity.

In terms of gender differences ,Dyo et al. (2016) indicated that male nurses had higher scores for MD intensity and frequency than female nurses. On the other

hand, Hatamizadeh et al. (2019) showed that the difference between males and females concerning MD was not significant. Interestingly, Saleh et al. (2019) and Hatamizadeh et al. (2019) reported no significant differences in MD frequency and intensity between single and married nurses.

Overall, findings related to socio-demographic factors were inconsistent across the included studies. These inconsistencies may be explained by differences in sample size, cultural and healthcare contexts, clinical settings, and the MD measurement tools used. Therefore, age and gender should be interpreted as possible associated factors rather than consistent predictors of MD.

Job-related Variables

Work experience was studied as a variable that may affect MD. Ameri et al. (2016) concluded that years of experience and heavy workload had a positive relationship with MD; however, De villers and DeVon (2013) showed that years of experience had no significant connection with MD scores. On the other hand, Lake et al. (2022) and Pooresmaeil & Aghamohammadi (2021) revealed that more experienced nurses reported less levels of distress, which indicates that MD scores decreased as the nurse became more experienced.

Ameri et al. (2016) reported that nurses had experienced higher MD when receiving informed consent forms from patients when they actually are not fully informed about the necessary information, which demonstrated failure of the consenting process. In terms of the work setting, Piers et al. (2012) found that nurses working in acute geriatric settings had more MD than nurses working in chronic settings and Lake et al. (2022) discovered that working in critical care units was associated with higher levels of MD. They have also pointed out that efficient communication and easier access to personal protective equipment (PPE) reduced MD, whereas the volume of care for patients infected with COVID-19 increased MD ($p < 0.01$). Even the type of employment may also be associated with MD, for example; Pooresmaeil & Aghamohammadi (2021) reported a significant relationship between the type of employment and MD intensity and frequency, and between job position and MD frequency, indicating that nurses in temporary-to-permanent positions had more MD than other nurses.

Organizational culture significantly influences nurses' work environment and psychological well-being. A positive culture enhances support and reduces stress, while a negative one increases occupational strain. Evidence from Jordanian nursing research has shown an association between organizational culture and workplace behaviors among nurses (Shahrour et al., 2022). Poor organizational culture may therefore contribute to stress, burnout, and MD indirectly by shaping nurses' autonomy, perceived support, workload management, and ability to participate in ethically complex decisions.

Consequences of MD on Nurses

MD is associated with negative consequences on nurses; for example, Hatamizadeh et al. (2019) found that MD was significantly associated with poor respect for patient rights and poor job and income satisfaction, and these factors were associated with higher turnover rates among nurses. In addition, MD increased avoidance behavior according to De Villers and DeVon (2013). Professional independence was also negatively correlated with MD and lack of autonomy impaired functioning and can cause MD. According to Saleh et al. (2019), extreme MD can lead to compassion fatigue among nurses. Dyo et al. (2016) reported that MD frequency showed a positive relationship with the intention to leave a position of employment. Lake et al. (2022) reported in their study that MD had a negative influence on the long-term mental health.

Discussion

This review focuses on exploring MD among nurses working in different clinical settings and navigating the factors related to it. The findings suggest that MD among nurses is highly variable and influenced by clinical context, measurement tools, and workplace environment. (Lievrouw, 2016; Zavotsky & Chan, 2016). The heterogeneity of measurement tools used across studies challenges the comparability of findings and highlights the absence of a standardized approach to assessing MD. In addition, it was noted that there are some inconsistencies in the intensity and frequency of MD and its relationship with demographic or clinical variables, such as the work setting (critical care units *versus* non-critical care units, acute *versus* chronic), years of experience, age of the nurse and employment status.

It is noted that some of the reviewed studies have reported that older nurses, and those who have more years of experience reported less levels of stress than their counterparts have. This may be explained by greater clinical experience and improved coping mechanisms among senior nurses.

Piers et al. (2012) revealed that acute and chronic geriatric work situations had distinct overall MD frequency scores. Futile care affected acute and chronic geriatric nurses equally. Given the higher turnover rates of patients and the seriousness of acute illness in a high-risk population in acute geriatric care settings, MD in acute care settings is more frequent than in chronic care settings where patients might be more stable and require less intensive care.

In addition, the higher level of MD reported in acute care settings may be related to greater patient acuity, rapid decision-making and frequent exposure to end-of-life situations, heavier workload, and greater ethical complexity. In contrast, chronic care settings may involve more stable patient conditions and more predictable care routines, which may reduce the frequency of morally distressing situations.

Many studies explored the relationship between the professional quality of life and work environment among ICU nurses, and identified the influencing factors of ICU nurses' professional quality of life. It was reported that the better the nursing work environment, the higher the professional quality of life of ICU nurses. Decision makers and managers can focus on improving the work environment of nurses, which may be a new perspective for managers to improve the professional quality of life of nurses and to stabilize the nursing team (Ni et al., 2023). In regard to the effect of gender, there are discrepancies, as some results reported that males showed higher levels of MD (Dyo et al., 2016), while others have reported no differences between the two genders (Hatamizadeh et al., 2019; Shoorideh et al., 2015). This could be partly attributed to the small sample sizes used in these studies which limit a definitive conclusion. Additional studies with more representative samples would provide more insights that are valuable.

Although perceived stress is conceptually distinct from MD, both constructs may occur in demanding clinical environments during health crises. A study conducted among Jordanian registered nurses during the COVID-19 pandemic reported high levels of perceived stress that negatively affected quality of life, with coping strategies playing a mediating role in this relationship (Albataineh &Alhawatmeh, 2024). While this study did not directly examine MD, it provides contextual evidence that stressful work environments during the pandemic may intensify nurses' psychological burden and may coexist with ethically challenging situations.

These findings highlight the importance of adaptive coping mechanisms and supportive work environments in reducing psychological burden among nurses. Although the study focused on perceived stress rather than MD, the findings provide contextual evidence of psychological strain that may coexist with MD in ethically challenging clinical situations.

Some team-level factors, like lack of autonomy, professional independence and avoidance behavior, were in many situations (Huffman & Rittenmeyer, 2012). In addition, staff shortage may contribute to organizational MD (Borhani et al., 2017). In various US studies, 45% to 50% of nurses have left their jobs or intended to leave their jobs due to MD (Shoorideh et al., 2015; Whitehead et al., 2015). This came in agreement with the study of Hatamizadeh et al. (2019) that reported a positive association between MD and the intention to leave a job. This may be explained by the fact that increased workload on nurses, could augment moral tensions and distress.

Due to COVID-19 and their uncertain futures, temporary-to-permanent nurses had higher MD than other nurses according to Pooresmaeil & Aghamohammadi (2021). The statistically significant difference in MD between different nurse positions in COVID-19 wards suggested that nurse managers and supervisors had less MD than clinical nurses, possibly due to their direct exposure to patients and fear of contracting the disease. According to Oh and Gastmans (2015) and Huffman and Rittenmeyer (2012), MD is associated with difficult care situations and has negative effects on nurses' physical and mental health The COVID-19 pandemic was associated with elevated levels of stress, anxiety, and depression among Jordanian populations, highlighting the widespread psychological burden during health crises. Psychological stress is a related, but broader, construct that should be distinguished from MD, although both may coexist in high-pressure clinical environments (Bakkar et al., 2024). Ultimately, this can lead to burnout. Burnout among pediatric nurses is influenced

by multiple contributing factors, such as workload, work engagement, and the COVID-19 pandemic, and is associated with adverse consequences including poor well-being and negative patient outcomes (Khatatbeh et al., 2024). Persistent MD has been identified as a contributing factor to burnout among nurses working in demanding clinical settings.

These studies were used only to contextualize the broader psychological burden experienced by nurses during and after the COVID-19 pandemic, rather than as direct evidence of MD.

According to Epstein et al. (2019) and Lake et al. (2022), the three-level framework of MD conceptualized leadership communication as a mid-level approach to reduce MD. Transparent, timely and effective communication would reduce nurses' MD and mental health symptoms. Professional support, independence and reflective task debriefing are the most essential MD defenses (Rodger et al., 2019). In addition to proper communication channels, and positive work environment, nurses need assistance and a safe, non-judgmental way to report moral discomfort.

Implications for Nursing

This review emphasizes that MD is a significant issue affecting nurses' well-being and performance. Nursing leaders should develop supportive ethical environments, improve communication, and provide moral resilience training. Educational programs should also prepare nurses to manage ethically challenging situations effectively.

Limitations

The generalizability of the findings should be interpreted with caution, as five of the ten included studies were conducted in Iran. This concentration of evidence from one healthcare context may limit the applicability of the findings to healthcare systems with different organizational structures, staffing models, resource availability, and market-based healthcare arrangements. In addition, differences in moral distress measurement tools, scoring systems, and clinical settings limited direct comparison across studies. Finally, most included studies used cross-sectional or descriptive designs, which limits causal interpretation of the relationships between moral distress and associated factors.

Conclusion

This review study provided an overview of MD among nurses and its causes. It demonstrated that nurses experience different degrees of MD, which vary by their working setting, clinical experience and patients' clinical condition. If not resolved appropriately, MD can lead to several negative outcomes, such as burnout and compassion fatigue. Therefore, proper handling of the situations, constant communication, and creating a positive work environment are paramount to alleviate MD and enhance the work experience.

During the COVID-19 pandemic, MD among nurses was particularly associated with high patient acuity, increased workload, fear of infection, limited resources, inadequate access to personal protective equipment, employment uncertainty, and challenges in leadership communication. These findings highlight the need for pandemic-responsive ethical support strategies and organizational preparedness to reduce MD during future healthcare crises.

Data Availability

This article is a review of existing literature, and no new data was generated or analyzed in this study. All data referenced is publicly available in previously published sources.

Ethical Considerations

No ethical approval was required for this integrative review.

Conflict of Interests

The authors declare no conflict of interests. All authors confirm that no financial or personal relationships have influenced the preparation of this manuscript.

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Author Contributions

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