Original Article

Moral Distress and Its Institutional Factors among Nurses in the Inpatient Department at a University Teaching Hospital in Kigali, Rwanda

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Abstract

Background
Moral distress has been shown to compromise nurses' ability to deliver high-quality patient care, and may lead to job turnover. However, few studies have been conducted on moral distress and its institutional factors for the nurses in Rwandan. Therefore, this research aimed to assess the moral distress level and its institutional factors among nurses working in selected departments at a teaching hospital in Rwanda.

Methods
One hundred and sixty-seven nurses were included in the cross-sectional quantitative study using the revised Moral Distress Scale. A proportional random sampling was used. The data were analysed using SPSS version 21. The relationship between factors was assessed by the Chi-square test.

Results
The moral distress level of the research participants was moderate. The maximum moral distress score was 303, the minimum 73; the standard deviation 43.12 and the mean was 152.

Conclusion
The shortage of nursing staff and lack of institutional support contribute markedly to higher levels of moral distress. Addressing these shortfalls should foster nurses' satisfaction and, subsequently, quality care of the patients.
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Keywords: Moral distress, risk factors, nurses

Introduction

The concept of moral distress in nursing was first introduced around 1984 by Jameton as a phenomenon that occurs in nursing practice and makes it difficult or impossible for nurses to carry out ethically approved actions in patient-care delivery because of institutional and patient's family member constrains.[1] Moral distress among nurses occurs when they know the ethically correct intervention or procedure to be done and are professionally skilled but they cannot do it due to either institutional, personal or legal constraints.[2] These limitations might stem from resistance by the patient's family, restrictive workplace policies or cultural norms, or a supervisor's specific preferences.[3] Moral distress affected nurse's biopsychological, cognitive and behavioral stability because of the violation of their beliefs and values, which finally results into being unable to deliver the desired care to the patients.[4] Moral distress among nurses was also considered as a cognitive, emotional disturbance that occurs when a nurses obliged to act against their moral requirement.[5]

Nurses can experience stress due to many responsibilities and care demands.[6] Caring is the core responsibility of a nurse; thus, a nurse should be able to assess the physical, mental, and emotional status of the patient and be able to respond to the basic needs and provide appropriate intervention.[7] Family care preferences and institutional regulations and policies may sometimes cause negative effects on nurses' practice because it results in moral distress for nurses.[8] Also, nurses are exposed to suffering and potentially providing ineffective treatment, which may result in ethical problems and also lead to moral distress among them.[9] There are different moral distresses among healthcare professionals, including nurses.

Studies across various global healthcare settings consistently highlight the significant presence of moral distress among nursing professionals. For instance, research conducted in Philadelphia, USA, indicated that one in three nurses experiences moral distress, with approximately 80% of healthcare professionals encountering at least one situation leading to moral distress within a hospital environment. Similarly, a study in Brazil revealed that 47.4% of nursing personnel reported moderate levels of moral distress. Further demonstrating this widespread issue, research from Saudi Arabia found that the intensity and frequency of moral distress among hospital nurses were approximately 52.28% and 51.54%, respectively, also signifying a moderate level. These findings indicate that moral distress is a pervasive concern for nurses worldwide, impacting a substantial portion of the workforce across diverse healthcare systems.[7]

Beyond its prevalence, research also identifies contributing factors and consequences of moral distress in nursing. In Belgium, moderate moral distress levels among nurses were directly linked to poor working conditions.[10] A study in Italy reported higher levels of moral distress among nurses in medical, surgical, and intensive care departments, associating this with increased job turnover. Furthermore, research from Ethiopia highlighted a particularly high proportion of moral distress among nurses, reaching 83.7%.[11] This study identified key associated factors, including poor communication, inadequate decision-making processes, staffing shortages, and the provision of inappropriate patient care.[5] These combined findings underscore that moral distress is not merely an individual experience but is often exacerbated by systemic issues within healthcare environments, ultimately impacting nurses' well-being and retention.

A research done in Rwanda at Butaro district hospital in 2021 highlighting moral distress and persistence related with caring cancer patients as primary issue in resources limited countries, identified three sources of moral distress according to resources prioritisation which are identifying resource

limitation on program level drive to cancer discrepancy, prioritising on setting crucial plan into individual patient cancer care, and informing the patient about the role of source prioritisation.[12] Another research done on health setting stress and contriving ways for critical care nurses at University teaching hospital , Rwanda, revealed that 80% of nurse participants experienced moderate to higher workplace stress.[13]

When healthcare professionals experience moral distress, it can negatively affect the entire health institution and patient outcomes. Such distress often contributes to disagreements within teams, breakdowns in communication among staff, a decline in the quality of healthcare provided, and consequently, a risk to patient safety.[14] In Rwanda, there were few studies done on this topic to show decision makers the level of moral distress among our Rwandan health care providers, especially nurses. Therefore, it was essential to conduct this study in our country to inform the decision makers of the way they could prevent moral distress among Rwandan nurses for maintaining the standard of higher optimum nursing care for our Rwandan population.

In general, there have been few studies done in Rwanda on this subject among health care providers, especially nurses. Therefore, this study aimed to assess the level of moral distress and its institutional factors for registered nurses working in selected departments at university teaching hospital of Kigali in Rwanda.

This study aimed to address the significant and unquantified problem of moral distress among nurses in Rwanda, a condition defined as the inability to act ethically due to various internal and external obstacles. Given the negative impacts of moral distress on nurses' well-being, job retention, patient outcomes, and overall healthcare quality, and the lack of local data in Rwanda at the time, this research was crucial. The study sought to assess the level of moral distress and identify its institutional factors among nurses at a university teaching hospital in Kigali. Its objectives were to determine the level of moral distress, identify institutional factors contributing to its development, and explore the relationship between nurses' demographic characteristics and these institutional factors. This was guided by research questions inquiring about the level of moral distress, the institutional risk factors, and the relationships between demographic and institutional factors on moral distress development. The findings were highly significant as they were expected to provide evidence-based insights for Rwandan policymakers to prevent moral distress, inform nursing education by integrating this topic into curricula and in-service training, and serve as a vital reference for future research in the field.

Methodology

Study design and setting

A cross-sectional design with a quantitative analytical approach was used in the study. Cross-sectional research is defined as a type of research that analyses collected data from the study population in single point in time.[15] This study was conducted at a university teaching hospital in Kigali in Rwanda, which has a large catchment area.[16,17]

Study population and sample size

The study population consisted of 287 nursing professionals across six hospitalization departments at the university teaching hospital. To ensure statistical representativeness, the sample size was determined using the simplified Yamane formula,

$$n = \frac{N}{1+N(e)^2}$$

where n represents the sample size, N is the total population, and e signifies the level of precision.[18]

$$n = \frac{287}{1+287(0.05)^2}$$

The calculation resulted in a final sample size of 167 nurses.

Inclusion and exclusion criteria

The study included registered nurses working in inpatient departments at the selected university teaching hospital who had at least six months of work experience, as they were more likely to have encountered situations leading to moral distress. However, the study excluded nurses on extended leave (such as maternity or sick leave), and those in purely administrative roles who did not engage in direct patient care, as their experiences were likely to differ significantly from those working on the bedside.

Sampling methods

The researchers adopted the proportional random sampling strategy in order maximize the generalisation of the research findings. Proportional stratified sampling, also known as proportional sampling, involves dividing a population into distinct subgroups (strata). From each of these subgroups, a random sample is then drawn.[19] The number of research participants selected from each subgroup is determined by its proportion relative to the entire study population.

Data collection procedure

The researchers collected data from nurses working in the inpatients department at university teaching hospitals of Kigali. Data collections started after getting ethical clearance from Institution Review board of CMHS (IRB) and university teaching hospital of Kigali ethical committee. The participant signed the consent form for voluntary participation prior data collection. The researcher gathered data from professional nurses working in the hospitalisation department at the university teaching hospital of Kigali. They used a self-administered questionnaire written in English, as most Rwandan nurses frequently use the language in their daily work. The researcher was present during data collection to provide assistance if any nurse needed help.

Data collection instrument

The questionnaire utilized in this study was an existing tool, and the researcher obtained written permission via email from its original developer for its use. This instrument comprised 30 questions organised into three distinct sections.

Reliability and validity of research tool

The researcher utilized a questionnaire previously developed and employed in an Ethiopian study titled "Moral distress and its association factors among nurses working at the northwest Amhara regional state referral hospital, northwest Ethiopia.[20] The researcher wrote an email to the author of the above research to ask for permission to use that questionnaire.

The fact that this specific tool had previously been used in different countries and cultural settings including Italy, Ethiopia and the United States of America, it strongly suggests that it has demonstrated cross-cultural validity. This implies that despite cultural differences, the core aspects of moral distress measured by the questionnaire are understood and interpreted consistently across diverse settings. The adoption of this particular questionnaire, coupled with its proven utility and high Cronbach's Alpha coefficients in various international contexts, provides strong evidence for both its validity and its reliability.

Data analysis

Following data collection, questionnaires were immediately reviewed on-site to ensure completeness and to score moral distress responses. Data were analyzed using IBM SPSS Statistics for Windows version 21.0. Descriptive statistics, including frequencies, means, percentages, and standard deviations, were calculated. To determine the relationships between variables, cross-tabulation and chi-square tests were used. Additionally, logistic regression analysis was conducted to identify significant predictors of moral distress, with a p-value of less than 0.05 considered statistically significant.

Ethical considerations

The institutional review board (IRB) of the University of Rwanda, College of Medicine and Health Sciences granted approval letter CMHS/IRB/587/2022 of December 2022 for the commencement of this research. Additionally, permission letter number EC/CHUK/065/2023 of April 2023 was obtained from the university teaching hospital ethical committee. Ethical principles of respect, beneficence, and justice were assured to the research participants before the data collection process. Participant had had the right to participate voluntarily and to withdraw from the research at any time without condemnation or penalties.[21] The participant signed the consent form before participating in the study. The researcher assured the confidentiality of the research participants in all the processes and each step of the research following data collection. To safeguard participant anonymity, the questionnaire did not include names or addresses. Access to participant information was restricted to the researcher and their supervisors, solely for research purposes.

Participants provided their informed consent by signing a consent form before taking part in the study. They retained the right to voluntary participation and could withdraw from the research at any point without facing condemnation or penalties.

Results

Demographic Characteristics of the Nurses

A total of 167 registered nurses participated in this study. More than half of participants were female. The majority of research participants were nurses, married, with a bachelor's degree and aged between 31-50 years. Most of the participants were working in the surgical department.

Level of Moral Distress among the Nurses

Each nurse participant's level of moral distress was assessed using the moral distress score (MDS) composed of 21 items or questions. Each item was evaluated by frequency and intensity. The frequency score multiplied by the intensity score was used to obtain the overall score of each situation. Thereafter, the total moral distress score of an individual was calculated, which was equal to the summation of scores for all 21 items. An individual with a score between 0 and 84 had a low level of moral distress, an individual with a score between 84 and 167 had a moderate score while a score of between 168 and 336 was rated as higher moral distress.

Institutional factors and moral distress

Table 1. Results of institutional factors leading to nurses' moral distress

NO	Items considered as moral distress institutional risk factors	Frequency and percentage (%)	
		YES	NO
1	Lack of effective leadership	95(56.9)	72(43.1)
2	Lack of organisation health system	96(57.5)	70(41.9)
3	Lack of support from institution	120(71.9)	47(28.1)
4	Nursing shortage in health system	133(79.6)	47(20.4)
5	Lack of discussion of ethical issue in health system	78(46.7)	89(53.3)
6	Lack of ethics committees	78(46.7)	89(53.3)
7	Lack of equipment/resources	134(80.2)	33(19.8)
8	Problems in the physical structure of the institution	78(51.9)	89(48.1)
9	Lack of consideration for nurse's knowledge	78(46.7)	89(19.8)
10	Excessive number of patients assigned to each nurse	115(68.9)	52(31.1)
11	Low autonomy at work	87(52.1)	80(47.9)
12	Being excluded from the decision-making of nurses	108(64.7)	59(35.3)

Source: Primary data

According to the findings of this study, the leading institutional factors associated with moral distress development for nurses in the selected departments at university teaching hospital were lack of equipment, followed by nursing shortage. Others include lack of support from the institution and a higher patient to nurse ratio, Table 1.

Relationship of institutional factors and moral distress

To determine the association of the institutional factors in the development of moral distress, a chi-square test was performed. Only two institutional factors namely institutional support and shortage of nursing staff were statistically significantly associated with moral distress, Table 2.

Table 2. Association between moral distress level among nurses and institutional factors

Variable	Nurse's Level of moral distress			Chi-Square	P Value*
	Low level of moral distress	Moderate level of moral distress	Severe level of moral distress		
	No. (%)	No. (%)	No. (%)		
Lack of effective leadership					
Yes	2 (1.2)	67(40.12)	26(15.57)	0.535	0.76
No	2(1.2)	47(28.14)	23(13.77)		
Lack of organisation health system					
Yes	2(1.2)	66(39.52)	28(16.77)	0.102	0.95
No	2(1.2)	48(28.74)	21(12.57)		
Lack of support from institution					
Yes	1(0.6)	79(47.3)	40(23.95)	7.027	0.03*
No	3(1.8)	35(20.96)	9(5.39)		
Nursing shortage in health system					
Yes	1(0.6)	93(55.69)	39(23.35)	7.630	0.02*
No	3(1.8)	21(12.57)	10(5.99)		
Lack of discussion of ethical issues in health system					
Yes	2(1.2)	52(31.14)	24(14.37)	0.174	0.91
No	2(1.2)	62(37.12)	25(14.97)		
Lack of ethics committee					
Yes	3(1.8)	51(30.54)	24(14.37)	1.566	0.45
No	1(0.6)	63(37.72)	25(14.97)		
Lack of equipment or resources					
Yes	3(1.8)	90(53.89)	41(24.55)	0.554	0.75
No	1(0.6)	24(14.37)	8(4.79)		
Problems in the physical structure of the institution					
Yes	1(0.6)	52(31.14)	25(14.97)	1.178	0.55
No	3(1.8)	62(37.12)	24(14.37)		
Lack of consideration for nurses' knowledge					
Yes	2(1.2)	74(44.31)	39(23.35)	4.124	0.12
No	2(1.2)	40(23.95)	10(5.99)		
An excessive number of patients assigned to each nurse					
Yes	2(1.2)	90(53.89)	41(24.55)	2.693	0.26
No	2(1.2)	24(14.37)	8(4.79)		
Low autonomy at work					
Yes	1(0.6)	59(35.33)	27(16.17)	1.360	0.50
No	3(1.8)	55(32.93)	22(13.17)		
Being excluded from the decision-making of nurses					
Yes	1(0.6)	70(41.92)	37(22.16)	5.808	0.05
No	3(1.8)	44(26.35)	12(7.19)		

Source: Primary data. No: Number %: Percentage *Significant at $p<0.05$.

The logistic regression analysis identified a notable association between institutional support and moral distress, although it did not reach the threshold for statistical significance at the standard α<0.05 level (P=0.074). The calculated Odds Ratio of approximately 2.12 indicates that nurses reporting a lack of institutional support had 2.12 times higher odds of experiencing severe moral distress compared to their supported counterparts. While the P-value exceeds the conventional cutoff, the magnitude of the odds ratio suggests a substantial practical implication for nursing leadership.

Regarding the study population, the majority of participants were female and reported a moderate level of moral distress. A Chi-square test of independence was performed to examine the relationship between organizational factors and the level of moral distress. As demonstrated in Table 3, both a shortage of nursing staff and a lack of institutional support were found to have a statistically significant association with heightened levels of moral distress (P< 0.05).

Table 3. The chi-square analysis of nurse's demographic factors and level of moral distress

Variable	Nurse's Level of Moral Distress			Chi-square	P Value
	Low level of moral distress	Moderate level of moral distress	Severe level of moral distress		
	No. (%)	No. (%)	No. (%)		
Gender					
Female	3 (2.78)	77 (79.19)	36 (34.04)	0.63	0.73
Male	1 (1.22)	37 (34.81)	13 (14.96)		
Nurse's educational level					
Diploma degree	1 (1.60)	48 (45.74)	18 (19.66)	3.13	0. 53
Bachelor degree	2 (2.16)	60 (61.44)	28 (26.41)		
Master's degree	1 (0.24)	6 (6.83)	3 (2.93)		
Age					
<=30 years	2 (1.32)	37 (37.54)	16 (16.14)	5.73	0.22
31-50 years	1 (2.23)	68 (63.49)	24 (27.29)		
>50 years	1 (0.46)	9 (12.97)	9 (5.57)		
Nurse's shift					
Day shift	1 (0.24)	4 (6.83)	5 (2.93)	5.36	0. 68
Day and night shift	3 (3.76)	110 (107.17)	44 (46.07)		
Patient and nurse ratio				1.27	0.32
½ ratio	0 (0.00%)	5 (4.72)	1 (2.03)		
1/3 ratio	0(0.00%)	7 (6.75)	2 (2.90)		
More than ¼ ratio	4 (5.40)	102 (102.53)	46 (44.07)		
Marital status					
Single	0(0.00%)	16 (16.19)	7 (6.96)	1.99	0.90
Married	3 (4.15)	79 (78.92)	35 (33.92)		
Divorced	0(0.00%)	13 (12.82)	5 (5.51)		
Widowed	1 (0.32)	6 (6.07)	2 (2.61)		
Years of experiences					
Less than 1 year	0(0.00%)	3 (4.71)	3 (2.01)	1.56	0.18
1-5 years	3 (2.99)	50 (49.09)	20 (20.92)		
6-10 years	0(0.00%)	49 (47.75)	21 (20.35)		
11-15 years	1 (0.70)	12 (11.43)	4 (4.87)		
16-20 years	0(0.00%)	0(0.00%)	1 (0.86)		

Source: Primary data No: Number %: Percentage

Discussion

The main objective of this study was to assess moral distress and its institutional factors among nurses working in selected departments at a university teaching hospital of Kigali, Rwanda. A cross-sectional quantitative questionnaire survey was conducted on 167 registered nurses. The leading factors which caused moral distress development were lack of equipment followed by nursing shortage. This may likely stem from a combination of resource scarcity particularly the paucity of essential equipment, staffing deficiencies and considerable workload, all of which prevent nurses from delivering ethically correct care.

The majority of the participants had moderate moral distress. These study findings are consistent with the results of a study conducted in South Africa which showed that the overall level of moral distress was moderate for participants.[22] The same result also reported in a study done in Saudi Arabia on a title entitled moral distress for intensive care unit health care providers: systematic review and meta-analysis reported that they were a moderate moral distress level among participants.[23] But different results reported in Iran revealed that the overall level of moral distress for the nurses was low at 57.6%.[6] Similar results also reported in Saudi Arabia in another research entitled prevalence of moral distress among health care provider showed that 75.1% of health care providers had moderate moral distress and 24.5% of health care providers had higher level of moral distress.[24]

The results of this study indicated that the primary driver of moral distress among nurses in the selected university teaching hospital departments was a lack of equipment (80.0%), followed closely by nursing shortages (79.6%). Other significant contributors included a lack of institutional support (71.9%), high patient-to-nurse ratios (68.9%), exclusion from clinical decision-making (57.5%), and systemic organizational issues (56.9%). These findings contrast with a similar study conducted in Brazil, where the leading causes of moral distress were related to the physical workplace environment (65.5%) and deficiencies in the organizational health system (64.2%). While lack of equipment (59.5%), excessive patient loads (55.4%), and nursing shortages (54.3%) were also identified in the Brazilian cohort, they were reported at significantly lower frequencies than in the present study.[25]

Research conducted in Turkey identified organizational systemic deficiencies and collaborating with incompetent colleagues as primary drivers of moral distress among nurses.[26] Similarly, a study in Thailand found that a lack of institutional support, resource limitations, and conflicts regarding hospital policies significantly contributed to the development of moral distress.[27] These findings align with research from Croatia focusing on critical care nurses; that study highlighted that institutional neglect, heavy workloads, and a lack of effective teamwork were significant predictors of moral distress.[10]

Current research indicates that only a shortage of nursing staff and a lack of institutional support are significantly associated with moral distress. Notably, no demographic variables were found to have a significant impact on distress levels. These findings align with a study conducted in Johannesburg, South Africa, which reported that a lack of administrative support, nursing staff shortages, and limited resources including inadequate nurse-to-patient ratios and equipment were primary drivers of moral distress among nursing professionals.[28]

In contrast to the primary findings of this study, research conducted in Iran demonstrated that specific demographic and professional variables significantly influenced moral distress levels. Specifically, marital status (P= 0.001) and shift type (P= 0.01) were found to have a statistically significant correlation with the experience

of moral distress among nursing staff.[6] Similarly, a study in Saudi Arabia identified a significant relationship between age and the prevalence of moral distress, reporting a P-value of 0.015.[24] These discrepancies suggest that while individual demographic traits may play a prominent role in certain cultural or organizational settings, the systemic institutional deficiencies identified in the current study act as overwhelming drivers of distress. Consequently, these structural failures may be so pervasive that they affect the nursing population uniformly, effectively overshadowing the influence of personal characteristics that might otherwise emerge in different healthcare environments.

Study strengths and limitations

A key strength is the use of validated instruments and random sampling, enhancing internal validity and generalisability within university teaching hospital. The cross-sectional design, however, limits causal inference. Self-reported data may be subject to social desirability bias. Furthermore, the study was conducted in a single tertiary hospital, which may limit generalisability to district or rural health facilities in Rwanda.

Conclusion

This cross-sectional study done at a university teaching hospital in Kigali identified a moderate level of moral distress primarily driven by acute nursing shortages and a perceived lack of institutional support. To mitigate these challenges and safeguard patient care quality, it is recommended that hospital administration prioritize strategic nurse recruitment to reduce excessive workloads while establishing accessible mental health support systems and resilience-building workshops. Future research should transition toward longitudinal, multi-center, or mixed-methods approaches to better understand the qualitative nuances of "lack of support" across the Rwandan healthcare system and to evaluate the long-term efficacy of these proposed interventions.

Author's contribution

Study Design/Conception: ME. TJD, KC and NG
Data Collection: ME
Analysis and Interpretation: ME. TJD, KC and NG
Manuscript Writing: ME and TJD

Conflict of interest

There are no financial, personal, or professional conflicts of interest that could influence or bias the outcomes, interpretations, or conclusions presented in the manuscript.

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