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Intent to stay, moral distress, and nurse practice environment among long-term care nurses: A cross-sectional questionnaire survey study

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Abstract

Background: Many long-term care facilities in the United States face significant problems with nurse retention and turnover. These challenges are attributed, at least in part, to moral distress and a negative nurse practice environment.

Objective: The purpose of the study was divided into two parts: first, to investigate the relationships among nurse practice environment, moral distress, and intent to stay; second, to explore the potential mediating effect of the nurse practice environment on the intent to stay among those with high levels of moral distress.

Design: This study was a descriptive, cross-sectional survey using targeted sampling.

Participants: A total of 215 participants completed the surveys. Participants were nationally representative of long-term care nurses by age, years of experience, employment status, and type of health setting.

Methods: This study was an online national survey of long-term care nurses' perceptions of their intent to stay, moral distress level (Moral Distress Questionnaire), and nurse practice environment (Direct Care Staff Survey). Structural equation modeling analysis explored intent to stay, moral distress, and the nurse practice environment among long-term care nurses.

Results: The mean moral distress score was low, while the mean nurse practice environment and intent to stay scores were high. Moral distress had a significant, moderately negative association with the nurse practice environment ($\beta = -0.41$), while the nurse practice environment had a significant, moderately positive association with intent to stay ($\beta = 0.46$). The moral distress had a significant, moderately negative association with intent to stay ($\beta = -0.20$). The computed structural equation modeling suggested a partially mediated model (indirect effect = −0.19, $p = 0.001$).

Conclusion: Since the nurse practice environment partially mediates the relationship between moral distress and intent to stay, interventions to improve the nurse practice environment are crucial to alleviating moral distress and enhancing nurses' intent to stay in their jobs, organizations, and the nursing profession.

Alpha Phi Chapter of Sigma Theta Tau International.

Clinical Relevance:

- Our study demonstrated that the nurse practice environment mediates moral distress and intent to stay.
- Interventions to improve the nurse practice environment are crucial to alleviating moral distress and enhancing nurses' intent to stay in their jobs, organizations, and the nursing profession.

KEYWORDS
intent to stay, long-term care, moral distress, nurse practice environment, nurses, structural equation modeling

INTRODUCTION

High rates of nurse turnover and poor work environment are linked with poor quality of care, such as increased incidence of health care-associated infections, falls with injury, pressure injuries, low rate of patient satisfaction, and prolonged hospital stays (Cho et al., 2016). All these adverse patient outcomes are costly to the organization in long-term care facilities (Halter et al., 2017). In long-term care facilities, staff turnover rates are high (average 53%); in particular, rates are 67% for certified nursing assistants, 45% for licensed practical/vocational nurses, and 48% for registered nurses (Texas Center for Nursing Workforce Studies, 2019). These turnover rates demonstrate the instability of staff in long-term care facilities.

A powerful predictor of nurse turnover is measuring nurses' intent to leave. Nurses' intentions to leave are often referred to as either intent to leave their job or intent to leave the nursing profession (Moloney et al., 2018). Nurses' turnover or intent to leave is interchangeably used with the concept of retention or intent to stay (Zúñiga et al., 2019). Both intent to stay and intent to leave are concepts related to the need for adequate and skilled workers to care for long-term care residents. Intent to leave is considered a rather deficit-oriented approach to a staffing shortage, while intent to stay is a more affirmative asset-based approach that highlights organizational strengths (Zúñiga et al., 2019). In a recent survey of nurses working in nursing homes and home health nursing, 25% indicated that they wished to find a job outside older adult care, 25% reported they were not certain about their intent to leave, and the remaining 50% described that they had no desire to leave the current workplace or wanted to continue working in older adult care services if they left the current workplace (Bratt & Gautun, 2018).

Factors associated with long-term care facility nurses' intent to leave their current job are stress, high workload, emotional exhaustion, health problems, and poor leadership or organizational commitment (Gaudenz et al., 2019). Among other factors, nurses' stress and dissatisfaction are two of the most critical determinants of nurse turnover (Halter et al., 2017). Intent to stay is influenced by lower rates of burnout, higher job satisfaction, staff empowerment, good supervisory support, better work relationships, better nurse–resident relationships in long-term care, and reports of providing good quality care (McGilton et al., 2013; Zúñiga et al., 2019). With this, it is imperative to explore long-term care nurses' sources of stress and dissatisfaction and identify organizational strengths to develop interventions that improve the professional well-being of nursing staff.

Furthermore, caring for older persons can be physically and emotionally challenging (Preshaw et al., 2016). Lack of capital and human resources, use of restraints, coercion, and end-of-life issues are just a few examples of issues that can lead to nurses' emotional and cognitive conflict elicited by feelings of powerlessness (Pijl-Zieber et al., 2018). All of these can raise ethical challenges for nurses that, if not resolved, can lead to moral distress. Moral distress is described as a phenomenon that arises when "one knows the right thing to do, but institutional constraints make it nearly impossible to pursue the right course of action" (Jameton, 1984, p. 6). A more current definition of moral distress is when an individual's moral integrity is seriously compromised, either because one feels unable to act according to core values and obligations or because attempted actions fail to achieve the desired outcome (Hamric et al., 2012). Among long-term care nurses, the majority (75.9%) in a study of 72 registered nurses and 53 licensed practical nurses reported experiencing situations of moral distress at least daily or weekly over the past year. Specific characteristics pose a great risk for moral distress within long-term care facilities, such as human resource constraints, competing for value systems (person-centered care versus task-oriented care), lack of administrative and managerial support, and lack of nurse–physician collaboration (Pijl-Zieber et al., 2018).

Both nurses' moral distress and intent to leave are thought to be influenced primarily by the nurses' practice environment and intent to leave. The nurse practice environment is defined as the organizational characteristics of a work setting that facilitate or constrain professional nursing practice (Lake, 2002). Unfortunately, no published studies examine nurses' relationship between the nurse practice environment and moral distress in the long-term care environment. In acute care settings, it is well established that a positive nurse practice environment has a positive impact on nurses' job satisfaction, intent to leave, burnout, nurses' job performance, nurses' productivity, and nurse retention (Aiken et al., 2008; Copanitsanou et al., 2017; de Lima Dalmolin et al., 2014; Lambrou et al., 2014). Similarly, there is a growing body of literature on long-term care facilities that focuses on testing the relationship among the nurse

practice environment on the nurse (Backhaus et al., 2017), the resident (Temkin-Greener et al., 2012), and the organizational outcomes (Schwendimann et al., 2016; Temkin-Greener et al., 2010; Zúñiga et al., 2015).

THEORETICAL FRAMEWORK

In this study, Corley's (2002) Moral Distress Theory provides a theoretical framework to investigate moral distress among long-term care nurses. Mareš (2016) has pointed out that Corley's (2002) Moral Distress Theory offers the most comprehensive perspective because it is the only theory that explains moral distress's inception, progress, and consequences. The Moral Distress Theory recognizes that moral distress has an impact on the resident (increased resident discomfort or suffering), the nurse (resignation, burnout, and leaving the nursing profession), and the organization (high nurse turnover, decreased quality of care, and low resident satisfaction). The Moral Distress Theory (Corley, 2002; Corley et al., 2001, 2005) proposed that nurses who have more autonomy, influence, and participation in decisions regarding their practice environment will be more likely to take action to resolve ethical dilemmas will have less moral distress; on the other hand, a nurse who works in an organization that does not provide a supportive environment and a mechanism to address ethically complex care and conflicts will experience more moral distress. Based on the Moral Distress Theory, we can assert that organizational support and practice environment play a crucial role in alleviating the experience of moral distress among long-term care nurses.

Effect of moral distress on intent to stay

Moral distress has a negative relationship to intent to stay. Moral distress is associated with organizational outcomes such as staffing patterns. Staff impact can include job satisfaction, nursing turnover or retention, and staffing patterns. Moral distress is negatively related to job satisfaction (de Lima Dalmolin et al., 2014), leading to high nurse turnover (Karanikola et al., 2014; Pijl-Zieber et al., 2018).

Effect of moral distress on nurse practice environment

Moral distress can adversely affect the nurse practice environment (Corley, 2002; de Veer et al., 2013; Hamric et al., 2012; Mealer & Moss, 2016; Oh & Gastmans, 2015). Effects of a high level of moral distress on the nurse practice environment include low nurse empowerment (Altaker et al., 2018), poor ethical work environment (Corley et al., 2005), increased levels of burnout (de Lima Dalmolin et al., 2014), lack of healthy staff relationship and collaboration (Karanikola et al., 2014), increase in caseload (de Lima Dalmolin et al., 2014), poor quality of care, inadequate staffing resource (Hiler et al., 2018), and low job satisfaction (de Lima Dalmolin et al., 2014; Hiler et al., 2018). Although well studied in the acute setting, gaps remain in understanding nurses' moral distress experience in long-term care facilities, particularly the causes and consequences on the nurse practice environment.

Effect of nurse practice environment on intent to stay

There is increased recognition of the importance of the nurse practice environment as an essential element of a successful healthcare organization. The nurse practice environment is positively associated with nurse retention (Lambrou et al., 2014) and negatively related to nursing turnover (Al Sabei et al., 2020). A better nurse practice environment was associated with positive job experience, low levels of burnout, fewer concerns with the quality of care, better staffing, higher perceived work effectiveness, high job satisfaction associated with supportive leadership, better teamwork, and fewer workplace conflicts, and fewer physical health problems (Al Sabei et al., 2020; Schwendimann et al., 2016). Hospitals with better nurse practice environments reported increased nurse retention and decreased nurses reporting intent to leave (Lee et al., 2020; Nowrouzi-Kia & Fox, 2020).

Effect of moral distress on intent to stay through nurse practice environment

Long-term care nurses working in long-term care facilities are confronted with ethical conflicts in their daily practice that, when not addressed, can lead to moral distress. A consistent finding in the literature is that moral distress is negatively related to the nurse practice environment (Corley, 2002; de Veer et al., 2013; Hamric et al., 2012; Mealer & Moss, 2016; Oh & Gastmans, 2015) and negatively associated with the nurse's intent to stay (Pijl-Zieber et al., 2018). On the other hand, studies about the nurse practice environment consistently demonstrated a positive relationship to the nurse's report of intent to stay (Aiken et al., 2008; Al Sabei et al., 2020). No published study reports the relationship among the three variables: moral distress, nurse practice environment, and intent to stay. The study proposes that the nurse practice environment mediates the antecedent variable, moral distress, and the outcome variable intent to stay (Figure 1).

STUDY AIM AND HYPOTHESES

The purpose of the study was divided into two parts: first, to investigate the relationships among nurse practice environment, moral distress, and intent to stay, and second, to explore the potential mediating effect of the nurse practice environment on the intent to stay among those with high levels of moral distress. Consequently, the following hypotheses were formulated:

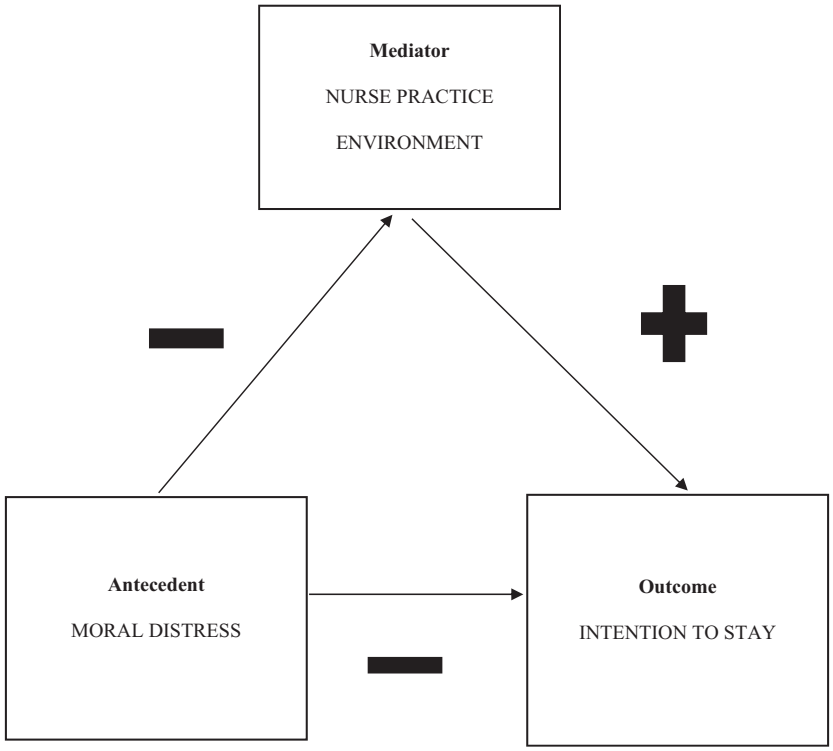

FIGURE 1 Proposed mediated models of the three variables.

Hypothesis 1. Moral distress is negatively associated with the nurse practice environment.

Hypothesis 2. Nurse practice environment is positively associated with intent to stay.

Hypothesis 3. Moral distress is negatively associated with intent to stay.

Hypothesis 4. Nurse practice environment does not significantly mediate the relationship between moral distress and intent to stay.

MATERIALS AND METHODS

Design and participants

This study was a descriptive, cross-sectional survey study using targeted sampling. A U.S. national sample of licensed nurses who provide direct resident care in a long-term care setting was recruited via Facebook.

Participants were included in the study if they worked as a registered nurse or licensed practical/vocational nurse in a direct care role in a long-term acute care hospital, in-resident rehabilitation facility, or skilled nursing facility. Direct resident care means the nurse is involved in any aspect of a resident's health care, including but not limited to medication and treatment administration, counseling, and education. The nurses included were charge nurses, medication nurses, respiratory nurses, wound care nurses, minimum data set coordinators, and nurse managers or supervisors who provide direct resident care in addition to their managerial roles. Participants were excluded if they (1) worked as a nurse practitioner or certified nursing assistant; (2) worked at the assisted living facility, home health care, or hospice; (3) worked in a high-level management position such as director of nursing or an assistant/associate director of nursing that does not provide direct resident care.

The required sample size was estimated following the recommendations for mediation analyses (Fritz & MacKinnon, 2007) and estimating effect sizes of 0.26 for paths α and β, which is halfway between Cohen's (1988) criteria of 0.14 (small) and 0.39 (medium) effect sizes. Based on these analyses and using Fritz and MacKinnon's (2007) recommendations for a test of joint significance of paths α and β in a meditational model, the study estimated the need for at least 159 licensed nurses to detect significant effects. The study also established a priori that the maximum sample size would be 350 respondents.

Measures

In our study, intent to stay is the nurses' perception of intent to stay in their current job, the nursing profession, and the long-term care setting for the next 12 months. Intent to stay was operationalized as scores on three single items (nurses' intent to stay in their

current organization, the nursing profession, and the long-term care setting) adapted from WE-THRIVE's (Worldwide Elements to Harmonize Research in Long-Term Care Living Environments) recommendation (Zúñiga et al., 2019). Items on the instrument were responded to through a 5-point Likert scale (1 = "strongly disagree" to 5 = "strongly agree"), where higher scores indicate a stronger intent to stay. Total scores can range from 3 to 15. There is no reason to expect validity and reliability scores to be reported for a single item. The modified 3-item ITS was investigated as part of the aim of the study.

The nurse practice environment was operationalized by the Direct Care Staff Survey (Temkin-Greener et al., 2009). The Direct Care Staff Survey is a 46-item scale developed to assess the long-term care facility practice environment and perceived work effectiveness reflected in five domains: leadership (10 items), communication and coordination (15 items), conflict management (7 items), staff cohesion (7 items), and perceived work effectiveness (7 items). Each item was responded to through a 5-point Likert scale (1 = "strongly disagree" to 5 = "strongly agree"), with higher scores indicating a better practice environment. Construct validity using multivariate regression with fixed effects analyses supported that leadership, communication, coordination, and conflict management are positive and significant predictors of team cohesion and effectiveness (Temkin-Greener et al., 2004). Also, factor loadings range for all, but 2 of the 56 items ranged from 0.366 and 0.827. Two items with values slightly below 0.300 were kept because they provide a theoretically meaningful fit. Discriminant and convergent validity demonstrate high correlations between items in the same domain and low correlations between items across domains (Temkin-Greener et al., 2009). The Cronbach's alphas range from 0.76 to 0.89 for the domain subscale scores, demonstrating good-to-high reliability for all domains of the team process and performance effectiveness. The Direct Care Staff Survey has been shown to have good psychometric properties with long-term care nursing samples (Temkin-Greener et al., 2009).

Moral distress was operationalized by the Moral Distress Questionnaire (de Veer et al., 2013). The Moral Distress Questionnaire is a 23-item scale to measure the intensity of moral distress within daily care in different healthcare settings as opposed to previously developed questionnaires that measure moral distress in a specific type of environment like acute care settings (Corley, 1995; Corley et al., 2001, 2005; Hamric et al., 2012; Schaefer et al., 2019). The Moral Distress Questionnaire has four domains: the care nurses provided (7 items), nurses' colleagues (8 items), protocols, standards, and reporting (4 items), and doctors and family (4 items). Each item was responded to on a 4-point Likert scale, with higher scores indicating greater distress (1 = "not distressing" to 4 = "very distressing"). The content validity of the MDQ was judged by five experts: a registered nurse (RN) specializing in nursing ethics, an RN specializing in nursing research, and three experts in ethics within health care. Initially, 24 items were included, but after being administered to 365 nursing staff, the final survey included 23 items (de Veer et al., 2013). The MDQ is an internally consistent scale, as demonstrated by the coefficient Cronbach's alpha of 0.90 (de Veer et al., 2013).

Due to the lack of an English-language tool that can validly measure moral distress in the long-term care setting, the Dutch version of the Moral Distress Questionnaire (de Veer et al., 2013) was modified, removing two items that do not apply to the current U.S. long-term care environment. Its psychometric properties were re-assessed, yielding a total of 21 items that were used in this study. The modified MDQ demonstrated a Cronbach's α coefficient of 0.87 for the overall scale and 0.60–0.74 for its subscales, demonstrating good reliabilities. Furthermore, a confirmatory analysis (CFA) of the 21-item four-factor scale of the MDQ showed an acceptable model fit (CMIN/DF = 2.0, CFI = 0.82, TLI = 0.77, RMSEA = 0.07). Factor loadings for each item depict a moderate-to-strong relationship (range 0.36–0.70) with the underlying construct. Both the MDQ and the modified MDQ displayed good psychometric properties.

Procedures

Following IRB approval, data were collected over 3 months using Facebook social media to recruit participants. Facebook is often used as a research tool for both paid and free Facebook advertisements (Bethel et al., 2021). Both recruitment strategies used targeted sampling, as users liked, shared, or circulated the link with others. Participants accessed the study instruments via a web-based survey (Qualtrics). The study included an informed consent script that provided information describing the study, participants' eligibility criteria and rights, and the researcher's contact information. To begin the survey, participants self-reported that they met the eligibility criteria. The 70-item battery included the three instruments as well as three demographic characteristics. It took an average of 22 min (SD = 7.66; min = 15; max = 55) to complete the survey. At the end of the questionnaire, participants could enter a lottery to receive a $100 Amazon electronic gift voucher provided to 20 participants.

Data analysis

The IBM SPSS Amos version 27.0 was used to perform structural equation modeling. These structural equation modeling tested hypotheses and relationships among observed and latent variables, thus moving beyond simple linear regression to gain additional insight.

The primary hypothesis of interest in our mediation analysis was whether the effect of moral distress on the intent to leave outcome could be at least partially accounted for by a path mediated by the nurse practice environment. To test the mediation effect, the study conducted a series of structural equation models using maximum likelihood estimation. First, the study compared how well a model with no mediating effect fits the data, comparing this to

a null model that assumes no relationships between the variables (Gunzler et al., 2013). This first test assessed whether such a model containing a direct effect of moral distress on nurses' intent to stay significantly improves the model fit over a null model containing no predictors.

Next, the study tested whether there was evidence for a mediating effect of the nurse practice environment on the relationship between moral distress and intent to stay. To do this, the study compared how well a model assuming this mediation fits that data to the previous model that did not consider a mediating effect on the nurse practice environment. In these models, the study used bootstrapped estimates of distributions and variances (Gunzler et al., 2013).

RESULTS

Sample characteristics

Two hundred and fifteen eligible participants, including 84 registered nurses and 113 licensed practical nurses, participated and completed the study from December 2020 to March 2021. The mean age of participants was 40 years, with an average of 10 years of work experience in nursing. Most of the participants were female ($n=180$, 83.7%), White ($n=160$, 74.4%), and licensed as a practical nurse or vocational nurse ($n=115$, 53.5%). RNs accounted for 39.1% of the sample, with most respondents having attained either an associate's ($n=56$, 26%) or a bachelor's degree ($n=67$, 31.2%) in nursing. Over one-quarter (26.5%) of the nurses were from the northeastern region, and 27.9% were from the western region of the United States. In addition, nurses had an average of 3.6 years working in their current facility and 8.7 years working in long-term care.

Work characteristics

Most ($n=184$, 85.6%) nurses worked full-time, while only 7% were in part-time or per-diem positions. The day shift was the most frequently reported shift ($n=125$, 58.1%). Most participants worked only in one facility ($n=137$, 63.7%), with many ($n=60$, 27.9%) working in more than one facility. In general, the nurses were "somewhat satisfied" ($n=54$, 25.1%) or "extremely satisfied" ($n=62$, 27.9%) about their salary or pay. On a 5-point Likert scale (with 5 representing "extremely satisfied"), the mean salary or pay satisfaction mean was 3.53 (SD = 1.4). Most nurses ($n=132$, 61.4%) did not belong to labor unions or employee associations.

Healthcare facilities characteristics

More than half of the participants ($n=115$, 53.5%) worked in skilled nursing facilities (SNF), with most assigned to a long-term care unit ($n=116$, 54%). Most nurses worked in facilities with a medium bed capacity of 50 to 100 beds ($n=63$, 29.3%) or 101 to 250 beds ($n=79$, 36.7%), of which 43.3% are private for-profit facilities and 24.7% are non-profit corporations.

Descriptive statistic

Table 1 presents the means and standard deviations of the scores on each instrument. The respondents' mean rating of 3.46 (SD = 0.45) of the nurse practice environments indicated a favorable view. Moreover, all five domains of the nurse practice environment were similarly rated with a range of 3.36 to 3.74.

The level of moral distress reported had a low mean rating of 1.98 (SD = 0.52). Two subscales, working with doctors and family ($M=2.09$, SD = 0.70) and coworkers ($M=2.03$, $SD=0.62$), indicated these are somewhat difficult situations that may cause moral problems to them. The nurses in our study most frequently reported feeling morally distressed when feeling they were not able to provide the standard of care when they believed that the nurse–resident ratio was too high, when they were concerned about a coworker's practice, when there were conflicting opinions among professionals about what was in the resident's best interest, or when those opinions differed from the residents' opinions. Coupled with low leadership support, dissatisfaction with management and poor conflict resolution were also associated with moral distress.

TABLE 1 Nurse practice environment, moral distress, and intent to stay.

Variables (scale range)	*M*	SD
Nurse practice environment (1–5)[a]	3.46	0.45
Leadership	3.36	0.56
Communication and coordination	3.45	0.42
Staff cohesion	3.43	0.69
Conflict management	3.38	0.63
Perceived work effectiveness	3.74	0.88
Level of moral distress (1–4)[b]	1.98	0.52
With regard to the care provided	1.94	0.56
With regard to coworkers	2.03	0.62
With regard to doctors and family	2.09	0.70
With regard to protocols, standards, and reporting	1.85	0.69
Intent to stay (1–5)[c]	3.91	1.06
Organization	3.64	1.45
Nursing profession	4.26	1.14
Long-term care setting	3.82	1.39

[a]Measured with the Direct Care Staff Survey (DCSS); scores range from 1 to 5, with higher scores indicating a more favorable practice environment.

[b]Measured with the Modified Moral Distress Questionnaire (MDQ); scores range from 1 to 4 based on intensity, with higher scores indicating greater distress.

[c]Measured with intent to stay (ITS), scores range from 1 to 5, with higher scores indicating a stronger intent to stay.

Many participants responded to the open-ended question regarding significant reasons for leaving their jobs. Most nurses reported the following as the top three reasons for leaving their job: being concerned about job stress, burnout, and emotional exhaustion ($n=105$, 48.8%), being unsatisfied with the work environment/culture ($n=88$, 40.9%), and being unsatisfied with the leadership and senior management ($n=93$, 43.3%).

Table 2 presents the hypotheses and significance tests of each variable. Moral distress had a significant negative association with nurse practice environment ($\beta=-0.41$, $p<0.001$), while nurse practice environment had a significant positive association with intent to stay ($\beta=0.46$, $p<0.001$). On the other hand, moral distress had a significant moderate negative association with intent to stay ($\beta=-0.20$, $p<0.001$). Results of the multiple linear regression indicated that there were collective significant relationships between moral distress, nurse practice environment, and intent to stay ($F_{2,209}=52.58$, $p<0.001$, $R^2=0.34$). The individual predictors were examined further indicated that nurse practice environment ($t=-7.54$, $p<0.001$) and moral distress ($t=-3.20$, $p=0.002$) were significant predictors of intent to stay.

Structural equation modeling analysis

The study hypothesized that the nurse practice environment would mediate the effects of moral distress on intent to stay. Variables included moral distress as measured by the Moral Distress Questionnaire scale, nurse practice environment as measured by the Direct Care Staff Survey, and intent to stay as measured by the intent to stay (Figure 2).

Table 3 summarizes the results of the various effects of moral distress on intent to stay as mediated by the nurse practice environment. The direct effect refers to the directional relation known as a path between two variables without going through one or more other variables. The indirect effect refers to the relationship between two variables via one or more intervening variables called mediator(s). Total effect refers to the outcome explained by both the indirect and direct effects. Indirect effects were used to test for mediation. The 95% confidence intervals for the indirect effects were estimated with bootstrapping using 1000 iterations; bootstrapped confidence intervals allow for asymptotically unbiased estimates for even non-normal data and are typically more robust against such

TABLE 2 Standardized regression weights.

Hypothesis	Standardized estimates	Bootstrapped (bias corrected) 95% CI		Multiple squared correlations	*p*-Value (one-tailed)
		Lower	Upper		
MDQ ➔ NPE[a]	−0.41	−0.53	−0.29	0.172	<0.001
NPE ➔ ITS[b]	0.46	0.34	0.57	0.296	<0.001
MDQ ➔ ITS[c]	−0.20	−0.33	−0.59	0.151	<0.001

[a]Hypothesis 1: Moral distress is negatively associated with the nurse practice environment.
[b]Hypothesis 2: Nurse practice environment is positively associated with intent to stay.
[c]Hypothesis 3: Moral distress is negatively associated with intent to stay.

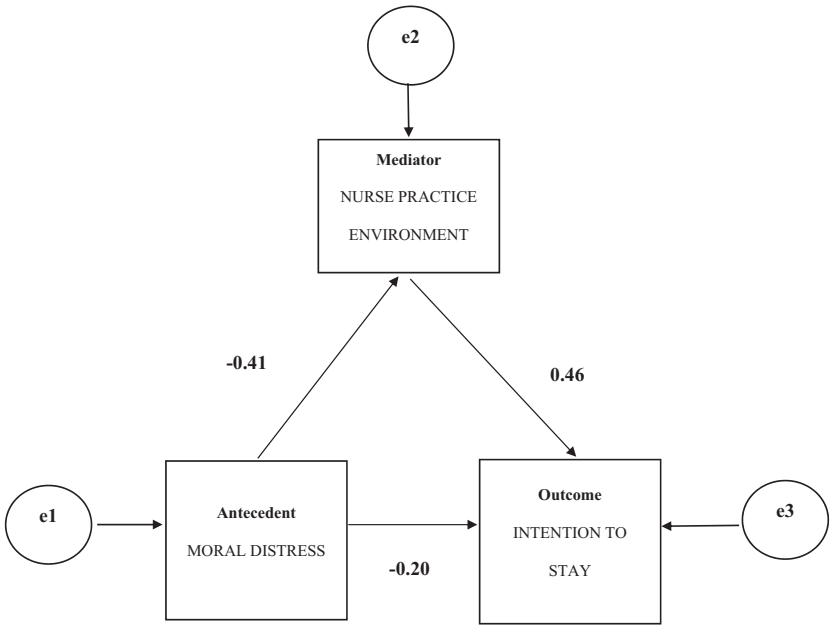

FIGURE 2 Mediation model nurse practice environment, moral distress, and intent to stay.

TABLE 3 Total effect, direct effect, and indirect effect of moral distress to intent to stay as mediated by nurse practice environment.

		Bootstrapped (bias corrected) 95% CI		
Hypothesis[a] MDQ →NPE→ITS	Standardized estimates	Lower	Upper	*p*-Value (two-tailed)
Total effect	−0.39	−0.50	−0.26	0.002
Direct effect	−0.20	−0.33	−0.06	0.003
Indirect effect	−0.19	−0.26	−0.13	0.001

[a]Hypothesis: There is no mediation effect on the nurse practice environment from moral distress and intent to stay.

violations than, for example, traditional *t*-tests (Cheung, 2009). When the 95% confidence interval does not contain 0, it can be inferred that a meaningful indirect effect exists.

The calculated total effect of moral distress on intent to stay was −0.39 ($p=0.002$), while the standardized direct effect was −0.20 ($p=0.003$). The magnitude of the direct effect is significantly smaller than that of the total effect (i.e., the β-weight for the direct effect, −0.20), which was not within the bootstrapped 95% confidence interval for the β-weight for the total effect (CI: −0.50 to −0.26).

To investigate whether the mediating effect of the nurse practice environment was significant, the study calculated the value and bootstrapped confidence interval for the indirect effect; the β-weight for this indirect effect was −0.19, and this effect was found to be statistically significant ($p=0.001$). Based on this analysis, it is inferred that the nurse practice environment is a mediating variable between moral distress and intent to stay.

Mediation can be full mediation or partial mediation. If the direct effect was not significant but the indirect effect, it is inferred that it is a full mediation. In this study, both direct and indirect effects were significant, suggesting partial mediation.

DISCUSSION

This study is the first to examine moral distress levels among licensed nurses (RNs and LPNs) employed in U.S. long-term care settings. This study contrasts with the acute care setting, whose primary participants are registered nurses. The main finding of this study is that the nurse practice environment partially mediates the relationship between moral distress and intent to stay. Our mediation analysis showed the significance of the indirect effect of the nurse practice environment on moral distress and intent to stay. The results indicate that moral distress among long-term care nurses can adversely affect nurses' intent to stay.

Hypothesis 1 posed a negative relationship between moral distress and the nurse practice environment. The results confirmed the negative effects of moral distress on the nurse practice environment in line with the research carried out by Corley et al. (2005), de Lima Dalmolin et al. (2014), and Hiler et al. (2018). Although nurses in our study reported a relatively low level of moral distress and a better nurse practice environment than that generally reported, they still reported experiencing moral distress. These moral-conflict-inducing situations can lead to poorer perceptions of work effectiveness, low job performance, low job satisfaction, low levels of staff empowerment, and resignations (Altaker et al., 2018; de Lima Dalmolin et al., 2014; Karanikola et al., 2014).

Our findings regarding nurse practice environment and intent to stay allow us to corroborate Hypothesis 2, that nurse practice environment is positively associated with intent to stay. This positive relationship is similar to previous studies by Aiken et al. (2008) and Cortelyou-Ward et al. (2010). The participants in our study tended to report favorable views of their nurse practice environments. This study resulted in nurses reporting high intent to stay in their current work organization, in long-term care, and generally in nursing. This report of a favorable perception of the nurse practice environment and a high degree of intent to stay among nurses in long-term care was surprising because it contradicts the general perception of poor working conditions (Perruchoud et al., 2021) and the high rate of nurse turnover in long-term care (Gandhi et al., 2021). Notable nurses' characteristics in this group include a high median age (40.5 years) and extensive work experience (10 years of work experience as a nurse, 3.6 years working in their current facility, and 8.7 years working in long-term care). Most of the nurses worked full-time, predominantly day shifts in dedicated facilities with a medium-sized bed capacity. Furthermore, nurses reported a high degree of satisfaction with their current pay. These characteristics were found to have a positive or negative impact on nursing turnover in other studies (Altaker et al., 2018; de Veer et al., 2013; Hiler et al., 2018; McGilton et al., 2013; Pijl-Zieber et al., 2018).

Test of Hypothesis 3 found that lower levels of moral distress were associated with higher intent to stay. Although studies addressing this link are limited, our results shared similar findings from previous research (Karanikola et al., 2014; Pijl-Zieber et al., 2018). Previous studies reported that long-term care has a high turnover rate and low nursing retention (Donoghue, 2010; Texas Center for Nursing Workforce Studies, 2019). On the contrary, this study reported that participants tended to have a high degree of intent to stay in both nursing and long-term care settings. These findings can be attributed to participants' characteristics, favorable work environment, and low-level reports of moral distress. The characteristics reported from previous studies to be associated with intent to stay include a healthy work environment, better pay and job satisfaction, older nurses, and better work relationships with residents and colleagues (McGilton et al., 2013). All

of these were found in this study. In addition, long-term care nurses in this study reported low moral distress levels, which differed from other studies. This result contrasts with acute care nurses who said they had high intent to leave because of high moral distress (Hiler et al., 2018). The finding may be due to several factors, such as the difference in educational preparation between RNs and LPNs, age, and patient characteristics. The sample characteristics differed primarily based on age; nurses in the acute care setting have a median age of 38 (Altaker et al., 2018; Hiler et al., 2018) compared to 50 for those working in long-term care. Older age among nurses is associated with "more experiences upon which to draw for dealing with unusual situations" and thus may manifest less moral distress (Mion et al., 2006, p. 149). In acute care settings, the source of moral distress has been associated with end-of-life care crises (Corley, 2002; Hamric et al., 2012; Mealer & Moss, 2016; Oh & Gastmans, 2015). On the other hand, long-term care is geared toward caring for residents where end-of-life situation is expected (Pijl-Zieber et al., 2018).

Hypothesis 4 showed a partial mediation between moral distress, nurse practice environment, and intent to stay. Our mediation analysis demonstrated the significance of the indirect effect of the nurse practice environment on moral distress and intent to stay. The results indicate that moral distress among long-term care nurses can adversely affect nurses' intentions to stay. Our study found that access to supportive leadership, excellent communication and coordination, cohesive staff, effective conflict management, and a high degree of work effectiveness perception showed both direct and indirect effects through moral distress and intent to stay. These data reinforce the study's hypothesis and earlier works (Lamiani et al., 2017; Pijl-Zieber et al., 2018) that a low level of moral distress is associated with increased intent to stay. These include increased job retention (Lamiani et al., 2017) and job satisfaction (de Veer et al., 2013). Conversely, a low level of moral distress decreases the feeling of burnout (Oh & Gastmans, 2015), which can positively impact the nurse's intent to remain in the profession and their position (Pijl-Zieber et al., 2018).

The direct effect of moral distress on intent to stay is reduced but still significant. This effect can be explained by the low-level moral distress experiences associated with the intent to stay nurses on the job. This low level of moral distress decreases the feeling of burnout (Oh & Gastmans, 2015) and increases job satisfaction (de Veer et al., 2013), which can have a positive impact on the nurse's intent to remain in the profession and their position (Lamiani et al., 2017; Pijl-Zieber et al., 2018).

The indirect effect of the nurse practice environment could be addressed by improving the working conditions that promote a healthy work environment. Therefore, fostering a positive nurse practice environment can help alleviate the experience of strong moral distress, promoting nurses' intent to stay. This is consistent with previous research in hospitals and long-term care facilities that demonstrated that a favorable nurse practice environment among nurses is associated with reports of positive job satisfaction (Schwendimann et al., 2016; Wei et al., 2018), a lower turnover intent (Lee et al., 2020; Nowrouzi-Kia & Fox, 2020), and higher nursing retention (Wei et al., 2018).

Although the findings were generally positive, nurses reported high levels of intent to stay. Nurses cited negative reasons that can impact their intent to stay. These are consistent with previous research about predictors of intent to leave (Halter et al., 2017; Lee et al., 2020; Nowrouzi-Kia & Fox, 2020). These results stress the importance of promoting a positive work environment (Lamiani et al., 2017), helping the individual develop coping strategies (Pijl-Zieber et al., 2018), and administrative responses such as continuing leadership training of nurse managers at all levels on how to support nursing staff (Corley, 2002).

Study limitations and future research

This study has some limitations. First, although the study's primary aim was to investigate the relationship between the independent, mediating, and dependent variables, the predictive limitation of cross-sectional design is a disadvantage. Due to cross-sectional design constraints, no cause-and-effect relationship between the predictor and outcome variables can be established without longitudinal data. So, in limitations like this, structural equation modeling provides a flexible framework within which causal models can be built (Gunzler et al., 2013).

Second, on sampling technique, the study aimed to recruit a U.S. national sample of licensed nurses who work in long-term care. The representativeness of the sample obtained from Facebook Inc. can be problematic (Bethel et al., 2021). The use of Facebook Inc. for recruitment in research has grown dramatically in recent years, yet sample representativeness remains underreported. In this study, the sample's representativeness was analyzed and compared with the available and the latest national population-based cohort of licensed nurses in the long-term care setting entitled "The 2017 National Nursing Workforce Survey" (Smiley et al., 2018). Our sample was similar. Calculating the response rate can be challenging because there is no predetermined population size, which is a limitation in this study. Some respondents will reply to a social request, but the investigator will not know how many received the request. Also, tracking when participation spreads through forwarded surveys and undocumented requests will be difficult or impossible.

Third, no subset analyses were done to differentiate the responses between RNs and LPNs on their reports of moral distress, nurse practice environment, and intent to stay due to sample limitation. Although there may be differences between RNs and LPNs, larger sample sizes will be needed to investigate this reliably.

Fourth, there might be some self-selection bias that may have led those who are prouder of their work to choose to complete the survey as opposed to those who are less proud or less interested in their chosen profession. Indeed, overworked and burnout nurses or nurses who are negative about their work might have less time or energy to participate in the study.

Fifth, in the United States, the Federal government is responsible for all long-term care regulations through the Department of Health and Human Services. The Medicare and Medicaid programs are primarily the primary payors for long-term care. These might be different in other international long-term care settings. Thus, our study was limited to the U.S. settings. When comparing results with other settings, the results must be interpreted with care.

Sixth, the study did not consider other nurse characteristics, such as job satisfaction, fatigue, and burnout, which might be significantly related to a nurse's intent to stay (de Veer et al., 2013; Gaudenz et al., 2019).

Finally, the major limitation in this study is the effect of the Coronavirus-19 (COVID-19) pandemic on long-term care nurses' perception of their intent to stay, the nurse practice environment, and the experience of moral distress.

Future research implications include comparing the difference in moral distress between nurses employed in acute care and long-term care settings and testing interventions that innovate, improve, and strengthen the nurse practice environment and retain the nursing workforce in long-term care. Interventions, including leadership training, interdisciplinary approach to care, and team-building activities to improve the nurse practice environment, are crucial to alleviate moral distress and enhance nurses' intent to stay in their job, organization, and the nursing profession.

CONCLUSION

This study addresses a call to reform and build a quality and sustainable long-term care system for the future. Our study demonstrated that the nurse practice environment mediates moral distress and intent to stay. Interventions to improve the nurse practice environment are crucial to alleviating moral distress and enhancing nurses' intent to stay in their jobs, organizations, and the nursing profession. Empowering nurse leaders through leadership training and leveraging the power of the nursing workforce through collective bargaining in long-term care is the key to success. This study also supports the need to encourage long-term care facilities to participate in the Magnet's Pathway to Excellence in Long Term Care program to improve the quality of care, resident safety, satisfaction, nurse turnover, job satisfaction, productivity, and teamwork, and medical errors in long-term care (American Nurses Credentialing Center, 2017). Finally, moral distress is understudied in long-term care and should be explored in further research.

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CONFLICT OF INTEREST STATEMENT

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this study.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

CLINICAL RESOURCES

- Moral distress in long-term care questionnaire modification and psychometric evaluation. https://journals.sagepub.com/doi/10.1177/09697330231151349?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%200pubmed.
- Measuring work environment and performance in nursing homes. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2663940/.

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