Research Report

Resilience, Moral Distress, and Workplace Engagement in Emergency Department Nurses

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Abstract

This cross-sectional, correlational study's purpose was to evaluate the effects of resilience and moral distress on workplace engagement in emergency department nurses providing direct patient care. Data were collected from 175 emergency department nurses using a Web-based survey. The higher the nurses' resilience and the lower their moral distress, the greater their workplace engagement. Resilience and moral distress were not correlated; furthermore, moral distress did not mediate a relationship between resilience and workplace engagement. Resilience was higher with greater job satisfaction, increased age, and longer tenure as a nurse. Workplace engagement increased with higher job satisfaction and less time seeking other employment. Moral distress scores were higher in nurses reporting lower job satisfaction. Multiple regression analysis revealed that resilience, job satisfaction, and moral distress were independent predictors of workplace engagement. Interventions that improve resilience and job satisfaction and/or lower moral distress may improve workplace engagement of emergency department nurses.

Keywords

resilience, psychological, moral distress, work engagement, emergency department nurses, job satisfaction

The emergency nursing workforce faces highly stressful workplace situations while being tasked with providing advanced nursing care to patients across the lifespan. These professionals develop a capacity for caring as well as a knowledge capital that provides their patients with high-level care. Stressors that limit emergency nurses from fully investing this knowledge capital into their patients include personal and system level factors. For some nurses, high stress levels force them from the profession or cause them to seek stress relief in emotionally, physically, and/or personally damaging behaviors. For others, personal practices that build resilience allow them to invest more fully in their workplace and better care for their patients. These resilience practices may protect nurses from workplace stressors and increase workplace engagement. This study used a cross-sectional survey to explore the effects of resilience and moral distress on workplace engagement of emergency department (ED) nurses currently providing direct patient care.

Protecting Workplace Engagement from Moral Distress Effects

Nursing staff such as licensed practical nurses, registered nurses (RNs), and advanced practice nurses (collectively referred to as *nurses*) experience significant stress (Hinderer et al., 2014; Lu et al., 2015) and moral distress (Hiler et al., 2018; Pavlish et al., 2016; Zavotsky & Chan, 2016) while providing patient care. Moral distress is a concept that can be experienced by individuals or as groups who experience emotional, psychological, and physical symptoms directly from this experience (Varcoe et al., 2012). Moral distress occurs when nurses know the appropriate actions to perform, but are prevented from providing those patient care actions by institutional constraints (Jameton, 1984) or because of patient-, team-, and system-level root causes (Epstein et al., 2019; Hamric & Epstein, 2017; for example, patient refuses to participate in care, the nurse is unable to obtain a provider order, resource limitations such as staffing, etc.). Varcoe et al. (2012) note that moral distress occurs in all health care workers when they repeatedly act or are prevented from

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acting on professional values and standards due to multiple workplace systemic, cultural, and social contexts, bringing about serious impacts on the individual and workplace environment. Preliminary work identified that moral distress outcomes for ED nurses can be anger, guilt, and stressful and unpleasant physical symptoms such as gastrointestinal distress and fatigue (Wolf et al., 2016). This distress can be difficult to cope with, and when coping mechanisms breakdown, ED nurses may experience a crescendo of moral distress, that is, a sustained level of moral distress known as moral residue (Epstein & Hamric, 2009; Hamric et al., 2012). This sustained level of stress caused by unrelenting moral distress can cause ED nurses to either consider leaving a position or to actually leave a position (Fernandez-Parsons et al., 2013; Trautmann et al., 2015).

Resilience practices allow nurses to be resilient and adapt healthfully to or recover from moral distress while minimizing their own suffering and preserving integrity (Hsieh et al., 2016; Rushton et al., 2015). Resilience, as defined by Rushton (2017), is the capacity to develop a response to disturbing, morally complex, confusing, or distressing situations, restoring them to a stronger position. Firefighters don protective equipment for safety in their often dangerous work environment. This study seeks to assess whether nurses can don resilience protection by practicing resilience to protect them from morally distressing and personally threatening work environments.

A variety of strategies support resilience building, such as developing self-awareness/insight (Rushton, 2017), cultivating mindfulness (Rushton, 2017), participating in religious practices, and seeking peer support (Hsieh et al., 2016). Resilience practices that move the nurse experiencing moral distress to an empowered stance of having moral conscientiousness rather than to a victim stance of moral failure (Rushton et al., 2016) could address moral distress. Resilience-building activities could reduce the negative effects of moral distress, allowing nurses to reframe the patient care situation and find morally acceptable ways of providing care (Monteverde, 2016).

One potential outcome of improving nurses' resilience and lowering their moral distress is an increase in workplace engagement. Workplace engagement is a positive state and indicates workplace fulfillment characterized by vigor (high activation) and dedication (high identification; Schaufeli et al., 2006). Nurses who experience high moral distress express a greater intent to leave their positions (Trautmann et al., 2015; Whitehead et al., 2015; Wolf et al., 2016); the cost for employers in terms of replacement can range from $14K to $60K (Geisz, 2010). Nurses who are resilient have higher levels of workplace engagement and are more likely to remain in their current positions (Mache et al., 2014).

Moral distress has been studied extensively in high-intensity nursing care specialties such as critical care (Bruce et al., 2015; Mason et al., 2014; Rushton et al., 2015), in general medical-surgical nursing (Rathert et al., 2016; Whitehead et al., 2015), and in nurse leaders (Pavlish et al., 2016). Resilience (Brown et al., 2018), and workplace engagement (Carter & Tourangeau, 2012; Fragoso et al., 2016; Laschinger, 2012) has also been studied in the general population of nurses. However, resilience, moral distress, and workplace engagement have not been examined together in the ED nursing population (Adriaenssens et al., 2015; Hsieh et al., 2016; Wolf et al., 2016). Understanding the relationships among these variables and their impact on emergency nurses can provide insights useful in future interventions that protect nurses from the negative effects of moral distress and build workplace engagement. Thus, interventions based on the findings from this study can be tested to assess whether they enhance ED nurse resilience. Increasing resilience could lower moral distress, raise workplace engagement, and decrease turnover. Ultimately, improving resilience and reducing moral distress may greatly improve patient outcomes.

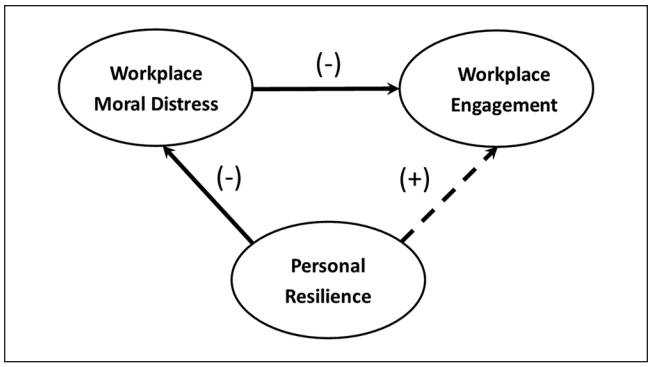

Figure 1. Guiding framework.

Purpose

The specific aims of this study were to (a) determine if ED nurses' levels of workplace moral distress, workplace engagement, and resilience vary by personal/demographic factors; (b) explore the relationships among resilience, workplace moral distress, and workplace engagement in ED nurses; and (c) determine if moral distress mediates the effect of resilience on workplace engagement. Based on the extant literature, we hypothesized that resilience is negatively related to moral distress, which, in turn, is negatively related to workplace engagement (Figure 1). Thus, moral distress is purported to influence the relationship between resilience and workplace engagement. In addition, resilience was expected to have a direct, positive relationship with workplace engagement.

Methods

Design and Sample

In this cross-sectional, correlational study, a convenience sample of pediatric and adult emergency nurses was recruited from five hospitals in two Midwestern US states and via six

Facebook groups of a professional nursing organization in two Southern US states. The ED nurses served urban inner-city and suburban patient populations. The EDs included level-one trauma centers as well as EDs that provide care to patients of all acuities. Inclusion criteria include the following: licensed nurses working in the ED, greater than 18 years of age, and able to read and understand English. A power analysis indicated that a sample of 200 ED nurses was required to detect a minimum correlation coefficient of .20 at 80% power.

Measures

The 25-item Connor-Davidson Resilience Scale (Connor & Davidson, 2003) measures resilience and resilience modifiability in clinical and general populations. Items are rated on a five-point Likert scale of 0 (not true at all) to 4 (nearly true all the time) and summed to form a cumulative score ranging from 0–100. In a sample of 806 participants from multiple studies, the instrument demonstrated convergent validity by significant associations with hardiness (r = .83), perceived stress (r = .76) and social support (r = - .36), with a Cronbach's alpha of .89; corrected item-total correlations ranged from .30 to .70 (Connor & Davidson, 2003). Cronbach's alpha in the current sample was .93.

The 27-item Measure of Moral Distress for Healthcare Professionals scale (MMD-HP; Epstein et al., 2019) measures internal (to the provider) and external (to the situation) clinical causes of moral distress. Items are rated on a Likert scale of 0 (never) to 4 (very frequently) for frequency of the situation and 0 (none) to 4 (very distressing) for intensity of distress. Frequency and distress scores are multiplied together to create a composite score with a range of 0–16. These scores are then summed to create an overall MMD-HP score with a range from 0 to 432. Higher MMD-HP scores indicate higher moral distress. Construct validity of the MMD-HP was supported by the findings of Epstein et al. (2019). Nurses scored higher than physicians on the MMD-HP, nurses who considered leaving their position had higher MMD-HP scores than those who were not, and higher scores on the MMD-HP were negatively correlated to Hospital Ethical Climate Survey scores. Reliability (Cronbach's alpha) for the nurse version was .93 in a sample of 440 nurses from two academic hospitals (Epstein et al., 2019). In the current sample, Cronbach's alpha was .93.

The 17-item Utrecht Workplace Engagement Scale (UWES; Schaufeli & Bakker, 2004) measures a positive, work-related state of mind. Each item is scored on a Likert scale of 0 (never) to 6 (always/every day). A mean score is calculated and ranges from 0–6. Construct validity of the UWES was supported by findings reported by Schaufeli and Bakker (2004) indicating that workaholism and engagement were weakly correlated. Cronbach's alpha was .93 in a sample of 2,313 (Schaufeli & Bakker, 2004). Cronbach's alpha in the present sample was .93.

Participants were asked to rate their job satisfaction on a five-point Likert scale from *Very Satisfied* to *Very Dissatisfied*, and to note the length of time for which they were looking for another position (*not currently looking, zero to one month, two months to five months, six months to a year*, and *greater than a year*). Demographic data were collected on age, race, sex, education, licensure status (RN, LPN, and APRN), number of years worked as a nurse, number of years in their current position, and number of years worked in an adult or pediatric ED.

Procedure

The PI's (PRC) University IRB provided approval (#17.0976) for this study. Nurses received recruitment information through (a) printed notices placed throughout the EDs (bulletin boards, etc.); (b) information provided during staff meetings and shift change huddles; (c) email invitations sent through work emails; and (d) invitations sent on work and professional organization social media sites. Survey data were collected via the Research Electronic Data Capture (REDCap) system (Harris et al., 2009). All notices, emails, Facebook solicitations, and in-person announcements contained the online survey link. The survey was available for seven weeks and took 20–25 minutes to complete when pretested. Participants were given the option to voluntarily offer their name and contact information (unattached from the survey data) for one $25 gift card drawing per week. At the end of the study, participants providing contact information were re-entered into a second drawing for five, $150 gift cards.

Data Analysis

Survey data were analyzed using SAS software version 9.4 (Cary, NC) of the SAS System for PCs (SAS Institute, Inc., 2018). Alpha was set at $<.05$. Descriptive statistics were conducted to characterize the sample using means, standard deviations, and 95% confidence intervals for all continuous variables, and frequencies and percentages for all categorical variables. Independent two-sample t-tests, analysis of variance, and Spearman's correlations were used to examine characteristics associated with moral distress, workplace engagement, and resilience. Pearson's Product Moment correlations assessed relationships among the study variables.

The Baron and Kenny (1986) approach to mediation was conducted. Multiple linear regression models were run to assess factors associated with workplace engagement. Three separate models were developed where workplace engagement was regressed onto resilience and moral distress separately then in combination, controlling for demographic characteristics (i.e., age, time worked at current position, and satisfaction with job) associated with workplace engagement. A Sobel's test was conducted to test for the indirect effect (i.e., mediation effect). A subsequent analysis was

conducted to examine whether moral distress moderated the relationship between resilience and workplace engagement.

Results

A majority of the 175 participants completing the demographics survey were female, white, RNs, aged between 18 years and 40 years, were satisfied or very satisfied with their job (69%) and were not looking for other employment (52%; Table 1). Of these 175 participants, 173 completed all three instruments. The mean scores for resilience, workplace engagement, and moral distress were (respectively), 75.0, 3.8, and 113.4 (Table 2).

Study aim one sought to uncover any variance of the three main study variables with personal/demographic factors (Table 3). For resilience, there were significant associations with age ($F_{3, 170} = 5.86$; $p = .0008$), time as a nurse ($F_{4, 169} = 4.49$; $p = .002$), and job satisfaction ($F_{4, 169} = 7.09$; $p < .0001$). Job satisfaction ($F_{4, 170} = 8.19$; $p < .0001$) and time spent looking for other employment ($F_{4, 170} = 5.69$; $p < .0003$) were significantly associated with moral distress and workplace engagement ($F_{4, 168} = 24.16$; $p < .0001$ and $F_{4, 168} = 3.29$; $p = .01$, respectively). Job satisfaction was correlated with all outcomes. Specifically, greater job satisfaction was associated with lower moral distress ($r_s = -.357$; $p < .0001$), higher workplace engagement ($r_s = .510$; $p < .0001$), and higher resilience scores ($r_s = .218$; $p = .004$). Similarly, the longer one looked for a job outside her/his current position was associated with moderate increases in moral distress ($r_s = .369$; $p < .0001$) and small decreases in workplace engagement scores ($r_s = -.18$; $p = .02$).

The focus of aim two was to determine the relationships among the main study variables. Resilience had a strong positive relationship with workplace engagement ($r = .58$; $p < .0001$), while moral distress had a moderate negative relationship with workplace engagement ($r = -.26$; $p = .0006$). There was no correlation between resilience and moral distress.

Study aim 3 sought to discover whether moral distress mediates the effect of resilience on workplace engagement. Figure 2 provides the results from the mediation analysis. Parameter estimates presented in the figure are from the multiple linear regression analyses. In the first model (i.e., regressing workplace engagement on resilience), there was a significant, small, and positive total effect of resilience on workplace engagement (parameter estimate (b) = 0.043; standard error (se) = 0.005; $p < .0001$). In the second model (i.e., regressing moral distress on resilience), there was a moderate, negative association ($b = -0.29$; $se = 0.35$; $p = .41$). Finally, in the third model (i.e., regressing workplace engagement on resilience and moral distress), there was a significant, small, direct effect of resilience on workplace engagement ($b = 0.042$; $se = 0.001$; $p = .0001$). Mediation can be observed when the effect of resilience on workplace engagement is reduced and is no longer significant when moral distress is adjusted for in the model (Baron & Kenny,

Table 1. Demographic Characteristics ($N = 175$).

	n (%)
Age	
18–30 years	59 (33.7)
31–40 years	59 (33.7)
41–50 years	33 (18.9)
51+ years	24 (13.7)
Race	
African American	3 (1.7)
Asian	2 (1.1)
Caucasian	167 (95.4)
Other	3 (1.7)
Sex	
Male	22 (12.6)
Female	152 (87.4)
Education	
Some college	1 (0.6)
Associates	38 (21.8)
Bachelors	111 (63.8)
Masters	22 (12.6)
Other	2 (1.2)
Current Position	
LPN	1 (0.6)
RN	170 (97.7)
APRN	3 (1.7)
How long have you worked at your current position?	
0–2 years	65 (37.1)
3–5 years	60 (34.3)
6–10 years	21 (12.0)
11+ years	29 (16.6)
How long have you worked as a nurse?	
0–2 years	36 (20.6)
3–5 years	49 (28.0)
6–10 years	34 (19.4)
11–20 years	28 (16.0)
21+ years	28 (16.0)
Do you primarily work for pediatric or adult patients in the ED?	
I work in a pediatric ED setting	9 (5.2)
I work in an adult ED setting	96 (55.2)
I work in both a pediatric and an adult ED setting	69 (39.7)
How satisfied are you in your job?	
Very Dissatisfied	5 (2.9)
Dissatisfied	11 (6.3)
Neutral	39 (22.3)
Satisfied	91 (52.0)
Very Satisfied	29 (16.6)
If you have thought about looking for a different position outside your current department/unit, in what timeframe have you been searching?	
Not looking	91 (52.0)
0–1 month	23 (13.1)
2–5 months	30 (17.1)
6–12 months	19 (10.9)
>12 months	12 (6.9)

Table 2. Descriptive Statistics for Major Study Variables ($N = 173$).

	Mean	S.D.	Median	Range
Resilience	75.0	13.1	75.0	45 - 100
Workplace Engagement	3.8	1.0	3.8	0.5 - 6.0
Moral Distress	113.4	60.3	101.0	0.0 - 310

1986). For overall workplace engagement scale, moral distress did not mediate the relationship between resilience and workplace engagement, and the indirect effect was not significant (indirect effect = .001 [-0.004*-0.29]; Sobel test statistic = 0.81; $se = 0.001$; $p = .42$; Figure 2). Because there was no mediation, we did an exploratory analysis to assess whether moral distress modified the effect of resilience on workplace engagement. An interaction term was included in the regression model, but there was no significant interaction between resilience and moral distress. Table 4 presents the multiple regression results. The overall model was significant ($F_{5, 167} = 28.42$); 44% of the variance in workplace engagement was explained by the model. Resilience and job satisfaction were positively associated with workplace engagement, whereas moral distress was negatively associated with workplace engagement while controlling for the other variables in the model. Resilience and job satisfaction were the strongest predictors of workplace engagement ($\beta = .50$ and $\beta = .29$, respectively).

Discussion

We examined the relationships among moral distress, resilience, and workplace engagement among ED nurses. Data from this majority female, white, RN population, primarily aged between 18 years and 40 years, reveals that nurses with higher resilience scores are more engaged in their work. The regression analysis also indicates that resilience was the strongest predictor of workplace engagement variance. These results support the hypothesis that a positive relationship exists between resilience and workplace engagement. A similar finding occurred in studies of Chinese hemodialysis nurses (Cao & Chen, 2019) and rural health nurses (Sellers, 2019) in which nurses with higher resilience had greater workplace engagement. Emergency nurses in this study are resilient and respond to stressful situations and nursing workplace complexities in a way that restores them to strength. Restored, they are more strongly involved in their work, and are more engaged in their workplaces than those with lower resilience levels.

Building resilience requires more than one approach and must be tailored to the specific nursing practice area (Lee et al., 2015). Recommended strategies for combating diminished resilience and workplace engagement include mindfulness/empathy trainings (Cao & Chen, 2019), post-incident debriefings, new-hire mentorships, implementation of American Association of Critical-Care Nurses Healthy Work Environment Standards (Hart et al., 2014), self-scheduling, and being allowed a break after caring for stressful patients (Lee et al., 2015). An important resilience practice for nurses as described by Lee et al. (2015) is connecting to other nurses through co-worker conversations and peer mentoring. The ability to confide their feelings to other nurses or staff (physicians, respiratory therapists, etc.) that have experienced comparable situations may build resilience because of the strengthening of intra-collegial connectedness as situations are discussed (Lee et al., 2015). These connections may be made in a formal setting such as during an on-unit debriefing or huddle meeting, or may be made informally, such as during conversations in a nonhospital, social environment. Resilience may be improved by increasing experience with different adverse situations and learning how to deal with such situations from co-workers (Matheson, 2016). Future studies should examine the feasibility and effectiveness of resilience-building strategies on improving workplace engagement in nurses.

The patient influx from the COVID-19 pandemic is currently causing elevated volumes of high acuity patients in the health care setting, concerns over contracting the virus and spreading it to those outside the workplace, and other issues. Varcoe et al. (2012) presciently noted that racial, economic, and gender inequities in health care would cause moral distress in workers. As health care disparities revealed during this pandemic are experienced by health care workers, moral distress levels can rise. As a result, workplace stress has exponentially increased in a working environment that some nurses already may consider harsh. Current evidence, as noted earlier, indicates that nurses should care for themselves in ways tailored to their individual needs and working environments, such as debriefing (on-unit or through communication channels that honor current social distancing rules) about current working conditions/changing or evolving living conditions, etc.; practicing good spiritual hygiene (meditating, practicing mindfulness, and connecting with meaningful religious practices), connecting with pets, peers, mentors, and/or family; and taking even short work breaks, etc. Caring for the self provides nurses with resilience and engagement as they care for patients during this pandemic.

Moral distress was moderately and negatively associated with workplace engagement and is a negative predictor of workplace engagement in the linear regression model, evidence supporting the hypothesized inverse relationship of these two variables. Other studies both refute and support these findings. A study involving surgical intensive care nurses revealed no significant correlation between moral distress and workplace engagement (Mason et al., 2014). However, Lawrence (2011) found a negative relationship between workplace engagement and moral distress. Both Mason et al. (2014) and Lawrence (2011) used a subset of the older Moral Distress Scale instrument, and Johnson-Coyle et al. (2016) used a previous version of a moral distress

Table 3. Main Study Variables by Demographic Characteristics ($N = 173$).

	Moral Distress		Workplace Engagement		Resilience	
	M (*SD*)	*p**	M (*SD*)	*p**	M (*SD*)	*p**
Age		.85		.06		.0008
18–30 years	110.0 (53.5)		3.6 (0.8)		70.1 (12.8)	
31–40 years	119.1 (73.3)		3.7 (1.0)		76.9 (11.3)	
41–50 years	110.8 (50.1)		4.1 (0.8)		75.6 (13.5)	
51+ years	96.7 (49.5)		4.1 (1.4)		82.8 (10.8)	
Race						
African American	71.0 (34.8)		3.5 (1.1)		72.0 (26.0)	
Asian	62.0 (43.8)		4.7 (0.9)		79.0 (11.3)	
Caucasian	115.1 (60.9)		3.8 (1.0)		75.1 (13.0)	
Other	95.0 (14.9)		3.9 (1.7)		72.0 (9.2)	
Sex		.14		.48		.69
Male	95.3 (49.0)		3.9 (1.0)		74.0 (14.0)	
Female	115.6 (61.4)		3.8 (1.0)		75.2 (13.1)	
Education		.86		.98		.07
Associates	116.8 (63.7)		3.8 (1.0)		72.1 (14.6)	
Bachelors	112.0 (61.2)		3.8 (0.9)		74.8 (12.7)	
Masters	118.1 (51.5)		3.8 (0.9)		80.2 (12.0)	
How long have you worked at your current position?		.88		.45		.34
0–2 years	116.9 (66.5)		3.7 (0.9)		72.7 (13.4)	
3–5 years	111.0 (57.5)		3.8 (1.0)		76.6 (12.1)	
6–10 years	106.1 (54.4)		3.8 (1.0)		74.9 (13.3)	
11+ years	116.8 (60.9)		4.0 (1.2)		74.9 (13.3)	
How long have you worked as a nurse?		.12		.20		.002
0–2 years	113.6 (72.1)		3.7 (0.7)		68.0 (12.6)	
3–5 years	97.5 (46.1)		3.8 (0.9)		75.4 (11.9)	
6–10 years	129.3 (61.5)		3.7 (0.9)		75.2 (10.8)	
11–20 years	126.3 (64.0)		3.8 (1.1)		77.8 (13.2)	
21+ years	104.9 (52.4)		4.2 (1.3)		79.4 (14.1)	
Do you primarily work for pediatric or adult patients in the ED?		.64		.36		.12
I work in a pediatric ED setting	110.6 (27.1)		3.9 (0.7)		70.2 (13.6)	
I work in an adult ED setting	109.2 (62.8)		3.7 (0.9)		73.9 (13.4)	
I work in both a pediatric and an adult ED setting	118.1 (59.0)		3.9 (1.1)		77.4 (12.6)	
How satisfied are you in your job?		<.0001		<.0001		<.0001
Very Dissatisfied	116.0 (56.6)		4.5 (1.4)		81.0 (16.0)	
Dissatisfied	179.8 (58.5)		2.7 (0.5)		70.9 (15.8)	
Neutral	138.2 (66.3)		3.3 (1.0)		73.3 (14.3)	
Satisfied	103.0 (51.4)		3.8 (0.7)		72.6 (12.1)	
Very Satisfied	87.2 (53.0)		4.9 (0.5)		85.7 (6.9)	
If you have thought about looking for a different position outside your current department/unit, in what timeframe have you been searching?		.0003		.01		.26
Not looking	95.0 (55.4)		4.0 (1.0)		76.9 (13.7)	
0–1 month	117.4 (46.7)		3.5 (0.9)		70.5 (13.4)	
2–5 months	138.1 (70.9)		3.6 (1.0)		74.6 (12.0)	
6–12 months	147.7 (61.2)		3.4 (0.9)		72.7 (10.6)	
>12 months	129.3 (43.3)		4.0 (0.7)		74.4 (13.6)	

*Independent t-tests and ANOVAs were conducted to examine differences in means.

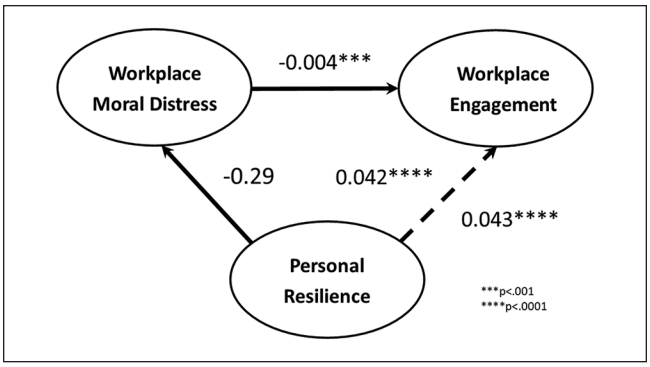

Figure 2. Mediation analysis results.

measurement, the Moral Distress Scale - Revised. Because this study used the latest moral distress instrument, Moral Distress for Healthcare Professionals scale, there is greater confidence both in the measurement of moral distress in this population and of the associations of moral distress with workplace engagement and the other study variables.

The level of nursing moral distress is higher than in other health care providers and is indicative of the severity of stressful situations experienced by nurses in the patient care setting (Johnson-Coyle et al., 2016). This finding may be more applicable to ED nurses who deal with the jarring circumstances that patients experience (domestic violence, traumatic events, etc.). Addressing moral distress, especially in a profession with much higher levels of this stressor, could improve workplace engagement, allowing nurses to practice the science and art of nursing more completely, potentially improving patient care.

Based on the multiple linear regression model results, job satisfaction was also moderately and positively associated with workplace engagement. A study of Canadian nurses revealed a positive correlation between job satisfaction and workplace engagement, indicating those more engaged in the workplace were generally more satisfied with their jobs (Laschinger, 2012). Pennsylvania nurses' higher levels of job satisfaction were correlated with higher levels of workplace engagement (Baumgardner, 2014). Support from management and nonmanager coworkers is associated with job satisfaction and may influence workplace engagement. Managers who establish a positive, supportive work-environment that reduces job-related emotional distress can cultivate workers' engagement and possibly increase retention (Hart et al., 2014). Furthermore, a major factor affecting engagement as well as resilience is support from non-manager co-workers (Cao & Chen, 2019). This is possibly due to increased empathy from shared experiences and more insightful advice. Future studies could examine how managerial and co-worker support builds workplace engagement that deepens job satisfaction and potentially improves nurse retention, which enhances the safety and quality of their patient care.

Table 4. Factors Associated with Workplace Engagement (N =173).

Predictors	*b*	*SE*	β	*t*	*p*
Resilience (one unit increase)	.037	.004	.499	8.23	<.0001
Moral Distress (one unit increase)	−.002	.0001	−.133	−2.19	.03
Age	.039	.066	.042	.60	.55
How long have you worked at your current position?	.062	.061	.069	1.01	.31
How satisfied are you in your job?	.308	.066	.29	4.65	<.0001

Overall R^2 = .46, Adjusted R^2 = .44, $F(5, 167)$ = 28.42, p <.0001.

Three aspects regarding the interaction between moral distress and resilience were identified by these data. The relationship between the two variables was weak and not significant, which is similar to results found in a study of nurses practicing in high-intensity patient care settings (Rushton et al., 2015). This may be explained by the lack of power to detect this association. The study was powered to detect a correlation as low as .20 with a sample size of 200; however, the sample size of those completing all three instruments was 173 and the correlation between moral distress and resilience was nonsignificant. Second, there was no mediating effect of moral distress on the relationship between workplace engagement and resilience. Among this group of nurses, resilience levels were not influenced by their levels of moral distress. This lack of a mediating effect could have occurred because the mechanism originally proposed may not be the process by which resilience affects workplace engagement. Finally, in an exploratory part of our analysis, moral distress also was found not to moderate the relationship between the other two variables. This could be due to the fact that the study was not powered to check for moderation or other factors.

Another possible explanation for the lack of a mediating effect could be the make-up of both of these concepts. Resilience and workplace engagement are relational concepts found in healthy teamwork and in support from colleagues and managers. Moral distress, while containing relational aspects, is also rooted in sociopolitical and institutional contexts (Varcoe et al., 2012), is less associated with personal relationships, and is more associated with systems (e.g., insurance payers, health care system, and financial executives) as well as the limits imposed by these systems. Moral distress is less a concept associated with personal relationships and thus may not mediate the effect of resilience on workplace engagement, two concepts deeply ensconced in human relationships. Future studies need to examine if other variables with greater human relationship aspects, such as burnout, can mediate the effects of moral distress and resilience on workplace engagement.

Immediate takeaways for nurses and nursing management include the following. Building resilience in nursing staff could improve workplace engagement. Nurse managers and educators can support nursing resilience by clearly outlining and making accessible professional development opportunities (Sellers, 2019), encouraging nurses to care for themselves by providing debriefings after critical events, and creating a break room environment that is homey and comfortable (Wei et al., 2019). Nurses can build their own resilience by seeking out professional development opportunities (Sellers, 2019), building relationships with colleagues for peer support and taking part in religious practices (Hsieh et al., 2016), verbalizing patient care and work environment issues that impinge on one's professional integrity, and engaging with their colleagues and coworkers so as to see oneself as part of a bigger community (Rushton, 2016). Since resilience is positively correlated with age and tenure as a nurse, facilities that retain nurses with greater chronological age and increased nursing tenure could develop a nursing pool with higher resilience, maintaining a greater volume of nurses with increased workplace engagement. Another takeaway is the emphasis that must be placed on lowering moral distress. Providing patient care that is either considered futile (Hiler et al., 2018) or delivered at the end of life (Johnson-Coyle et al., 2016) is a significant cause of moral distress. Providing debriefing opportunities surrounding specific end-of-life cases, as well as offering ethics education that guides nurses on navigating the moral complexities involved with end-of-life care could provide nurses relief from both moral distress and a concomitant increase in job satisfaction and workplace engagement.

Limitations of this study include the measurement of job satisfaction by a single item instead of a reliable and valid job satisfaction scale. Future studies could measure job satisfaction with a psychometrically sound job satisfaction tool, similar to the one used in Johnson-Coyle et al. (2016) study. Another limitation is with the measurement of our variables. We chose to include ordinal-level variables as opposed to continuous variables. Although continuous variables provide more information, categorizing the variables allowed us to reduce the potential for participants being identified. In addition, the study's cross-sectional design is limited to exploring relationships and not causality. To further examine if moral distress mediates the relationship between resilience and workplace engagement, future studies could implement a longitudinal approach that includes nurses who have higher levels of moral distress. Finally, this study was underpowered, as 173 nurses completed the online survey, which is fewer than the 200 required to reach full power. While data collection was completed before the COVID-19 pandemic, moral distress could have been a leading cause of this lack of participation. As noted above, nurses have higher levels of moral distress, and this study's results indicate a negative correlation between moral distress and workplace engagement. Nurses with higher levels of moral distress are less likely to be engaged and thus be less interested in completing a survey. Addressing these limitations will allow future studies to further clarify the effect moral distress has on the relationship between resilience and workplace engagement. Understanding the relationships between these variables would provide more insight into whether building resilience and lowering moral distress subsequently increases workplace engagement and improves workplace health.

To conclude, resilience was a strong predictor of workplace engagement, whereas moral distress was a moderate, negative predictor of workplace engagement. The evidence does not support a relationship between resilience and moral distress, but does suggest that interventions increasing resilience and/or lowering moral distress could improve workplace engagement. Building resilience and lowering moral distress may improve nurse's workplace engagement and job satisfaction especially when they feel embattled by a variety of workplace stressors. In an environment with multiple, system-level stressors, resilience building could provide the necessary personal protection nurses require to engage in their workplaces amidst significant stressors. Resilient nurses with higher job satisfaction and greater workplace engagement invest more deeply in their workplaces.

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