Exploring Well-being in Rural New Graduate Nurses Transitioning to Practice

A Pilot Study

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Abstract

Purpose: While stress, anxiety, depression, and professional well-being are beginning to be explored in newly graduated registered nurses as key psychological determinants in their transition to practice, these variables are poorly described in those transitioning to practice in rural settings. Therefore, this study aimed to describe the prevalence of and associations among these variables in newly graduated registered nurses transitioning to practice in rural community and critical access hospitals in Texas.

Sample: Using convenience sampling and multiple recruitment methods, 24 registered nurses with a range of 4 to 23 months' experience participated in the study.

Method: A cross-sectional, associational research design was used. After obtaining Institutional Review Board approval, participants completed online surveys regarding their perceptions of stress, anxiety, depression, professional well-being, job satisfaction, and resignation ideation.

Findings: Participants reported a mean age of 29.6 years and were mostly female (91.7%) and white (70.8%). High levels of job satisfaction were reported by 62% of the sample and only one-third reported frequent thoughts of resignation ideation. Slightly more than half of the participants (58.4%) reported a lower or at-risk level of professional well-being. Lower levels of professional well-being were significantly associated with higher levels of perceived stress, depression, and anxiety, more frequent resignation ideation, and lower levels of job satisfaction.

Conclusions: More research is needed to understand the determinants and outcomes of professional well-being in registered nurses transitioning to practice in rural settings to develop evidence-based interventions to help rural nurse preceptors, educators, and leaders support them.

Keywords: Well-being, New graduate nurses, Rural hospitals, Transition to practice, Job satisfaction, Resignation ideas

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The 46 million Americans living in rural communities face many healthcare challenges, including reduced availability of services, fewer available healthcare professionals, and the potential distance they may have to travel to obtain these services (United States Department of Agriculture, 2021; American Hospital Association, 2023). In the United States, there are 1800 rural hospitals, 48% of which have 25 or fewer staffed beds. In Texas, there are 3.1 million

individuals living in rural areas and 157 rural and critical access hospitals (CAH), 57% of which have 25 or fewer staffed beds (Texas Organization of Rural and Community Hospitals, 2022).

Approximately 11% of the 3.2 million registered nurses (RNs) with an active U.S. license work in rural hospitals (Health Resources & Services Administration, 2018), but the number of rural nurses working in Texas is unknown. Rural hospitals struggle to attract and retain nursing staff and have lower retention rates than urban hospitals (Blegen et al., 2017). In Texas in 2022, RN vacancy rates in rural CAH and rural non-CAH hospitals were 17.2% and 18.4%, respectively (Texas Center for Workforce Studies, 2022). Hiring newly graduated nurses (NGNs) may be one solution to fill vacant positions in rural settings.

NGNs must work quickly to acquire the additional knowledge, skills, and experience they need while becoming competent healthcare team members (Duchscher, 2008). NGNs also report experiencing significant stress as they transition to professional nursing practice, which may result in subsequent challenges to their psychosocial and professional well-being and place them at risk for resignation ideation or turnover. In 2023, the turnover rate of U.S. nurses with less than one year of experience was 28.7% (Nursing Solutions Inc., 2023), but the turnover rates of NGNs working in rural United States settings are unknown. Studies exploring variables associated with psychosocial and professional well-being in rural NGNs are sparse. Therefore, this pilot study aimed to explore the professional well-being, psychosocial health, job satisfaction, and resignation ideation of NGNs transitioning to practice and working in Texas CAH and rural non-CAH hospitals.

Background

Rural Settings and the Transition to Practice

Rural residents have fewer opportunities to find primary and specialty care in their community and may have difficulty finding transportation and financial resources needed to access healthcare, resulting in health inequities (National Rural Healthcare Association, 2024). Nurses working in rural settings are often expected to function as nurse generalists, serving a variety of patient ages, demographics, and acuity levels and with fewer resources than their urban counterparts (Fahs & Rouhana, 2021). In a scoping review by Burrows et al. (2019), experienced nurses in rural settings identified several areas of concern, including poor recruitment and retention, difficulty scheduling time off, lean financial resources, and limited rural-specific continuing education. Transitioning to practice in rural settings is also challenging. In a scoping review of transition support needed by rural NGNs, Calleja et al. (2019) identified that NGNs feel the pressure to become competent in their generalist role quickly despite the limited financial and human resources for education and mentoring and a lack of time in the fast-paced clinical setting. Calleja et al. (2019) advocated for providing structured support programs for these rural NGNs because of their increased need for encouragement, support, and corrective feedback and the risk of turnover when these needs are unmet.

Professional Well-Being

In 2019, the National Academies of Sciences, Engineering, and Medicine (NASEM) described professional well-being as an integrative concept that describes the quality of life concerning an individual's physical and mental health within the context of school or work-related environmental, organizational, and psychosocial factors. Lower levels of professional well-being have implications for poor mental and physical health, higher risk for burnout, and lower quality

patient care. Jarden et al. (2021) reported that the well-being of NGNs increased over time as their levels of emotional exhaustion, workload, and stress decreased. Hospitals traditionally offer nurse residency programs to provide NGNs with additional knowledge and skills to mitigate these negative experiences; however, these programs are less likely to be available in rural settings (Calleja et al., 2019). Research specifically exploring the professional well-being of NGNs as they transition to practice in rural settings is sparse.

Psychosocial Health

For this study, psychosocial health was envisioned as being comprised of perceived stress and symptoms related to anxiety and depression. Perceived stress is an individual's psychological response to acute and ongoing events that are experienced as overloading, unpredictable, or uncontrollable (Cohen, 1983). Stress in NGNs is commonly attributed to feeling overwhelmed, facing a steep learning curve, and being unable to disconnect from work during off times (Feeg et al., 2021). During the COVID-19 pandemic, 76% of NGNs transitioning to practice reported moderate to severe stress levels and identified their top stressors as navigating the transition to practice, working during the pandemic, and personal finances (Urban et al., 2022). Using qualitative methods, Hoppe and Clukey (2020) discovered that the unpredictability of where NGNs would be assigned to work during their shift and inconsistencies in their on-the-job training contributed to their stress levels. Stress levels of RNs transitioning to practice in rural hospitals have yet to be explored in the research literature.

Anxiety is an emotion characterized by worry, occurring most days, accompanied by restlessness, being easily fatigued, difficulty concentrating, or other physical symptoms (American Psychiatric Association [APA], 2022). While levels of anxiety vary, Jarden et al. (2021) reported that anxiety levels reached an all-time high during the first year of practice in NGNs. During the

COVID-19 pandemic, 27.6% of NGNs reported moderate to high levels of anxiety, a level at which a referral to healthcare providers should be made for assessment and possible treatment plans (Urban et al., 2022). For these NGNs, anxiety levels peaked in early independent practice at 4 – 8 months' experience. In the rural setting, one source of NGNs' anxiety stems from feeling unprepared and lacking the skills to care for or make decisions for a deteriorating patient (Towner et al., 2022). More research is needed regarding the prevalence of anxiety in NGNs transitioning to practice in rural settings.

Depression is a negative affective state occurring more days than not that causes a persistent feeling of sadness and loss of interest accompanied by physical and cognitive changes (APA, 2022). Pre-pandemic, clinically severe levels of depression have been found as early as six weeks into NGNs' transition to practice (Han et al., 2019). During the COVID-19 pandemic, 31.2% of NGNs reported moderate to high levels of depression and may have benefitted from a referral to a healthcare provider for assessment and possible treatment and depression levels peaked in NGNs with 4 to 8 months of experience (Urban et al., 2022). NGNs working in a rural setting reported feelings of isolation three months into their transition (Lea & Cruickshank, 2017). However, little is known specifically about the prevalence of depression in rural NGNs.

Job Satisfaction and Resignation Ideation

Job satisfaction is defined as the positive feeling experienced by employees when their work-based achievements validate their sense of worth in the workplace (Cambridge Dictionary, n.d.). Pre-pandemic studies with NGNs identified that increased workload and understaffing (Africa & Trepanier, 2021) or experiencing workplace incivility (Anusiewicz et al., 2019) resulted in lower levels of job satisfaction. Low levels of job satisfaction are strongly associated with resignation ideation or intent to leave one's job in the future. In a pre-pandemic study with NGNs, intent to

leave increased steadily through the end of the second year (Africa & Trepanier, 2021). Urban et al (2024) discovered that NGN resignation ideation during the COVID-19 pandemic peaked at 9-12 months of experience. Little is known about job satisfaction and resignation ideation in NGNs transitioning to practice in rural U.S. settings.

Theoretical Framework

The systems model of clinician burnout and professional well-being suggests that clinician well-being does not occur in isolation but within a more extensive system that includes the external environment, the healthcare organization, and frontline care delivery (NASEM, 2019). Decisions made at these three levels influence two work factors: job demands and job resources. Job demands are the demands affecting the individual level, such as excessive workload, inadequate staffing, and time pressures. Job resources include organizational culture, recognition, professional relationships and social support, and work-life balance (NASEM, 2019). These work factors have a two-way relationship with the clinician's personality and coping strategies.

Factors associated with psychological well-being in NGNs vary over the transition to the practice period (Duchscher, 2008; Jarden et al., 2021). When rural and non-rural NGNs experience a decrease in their physiological and psychological quality of life, professional well-being may be affected. Decreased psychological well-being may contribute to resignation ideation (Urban et al., 2024) and burnout in NGNs and has implications for patient care, healthcare organizations, and the society they serve (NASEM, 2019).

Objectives

While stress, anxiety, depression, and professional well-being are beginning to be explored in NGNs as key psychological determinants in their transition to practice, these variables are poorly described in rural NGNs. Therefore, the purpose of this pilot study was to:

1.) Describe the prevalence of stress, anxiety, depression, and well-being in newly graduated nurses transitioning to practice in rural settings.
2.) Explore the relationships among job satisfaction, resignation ideation, stress, anxiety, depression, and well-being in newly graduated nurses transitioning to practice in rural settings.

Methods

Design

This pilot study utilized an observational, cross-sectional design. The university's Institutional Review Board approved the study (IRB protocol#: 2023-0001). The strengthening of the reporting of observational studies in epidemiology (STROBE) guidelines for cross-sectional studies was used to present this study report (von Elm et al. 2007).

Sample and Setting

Three methods were used to send potential participants a link to the study's informed consent and research questionnaire. The primary method was sending recruitment emails to chief nursing officers of rural and critical access hospitals in the Texas Organization of Rural and Community Hospitals network. In addition, recently graduated alumni from the researcher's university were contacted directly via text, and postings were placed on a private alumni Facebook page with an invitation to participate if they were working in a rural facility. Lastly, participants were recruited from rural hospitals within an extensive central Texas hospital system. For this study, hospitals included for recruitment were defined as rural by using the following criteria: 1.) Medicare designation as a CAH, Sole Community Hospital (SCH), Rural Referral Center (RRC) hospital, or 2.) rural designation as defined by Texas Medicaid, or 3.) facility is located in a Texas county with less than 60,000 individuals.

Duchscher (2008) believes that the transition to practice period for NGNs lasts between 12 and 18 months, while Benner (1984) suggested that the initial stages of practice (novice and advanced beginner) typically take two years to complete. Therefore, the inclusion criteria for participation included those over 18 years old, working in a rural or critical access hospital in Texas, and having no more than 24 months of experience as an RN. Participation in the study was voluntary and confidential, and no personally identifying information was collected.

Measurement

An online survey was created to collect the research data. The survey included five sections: (1) informed consent and inclusion/exclusion questions, (2) demographics, (3) work-related questions, (4) job satisfaction and resignation ideation questions, and (5) established surveys with normed reference points for measuring stress, anxiety, depression, and professional well-being.

The demographic questions included the participants' age, gender, and race/ethnicity. The work-related section included questions regarding previous healthcare experience as assistive licensed personnel, number of months experience in nursing, nursing degree earned, unit and shift assigned, distance traveled one way to work, and approximate number of beds within their hospital. Participants' current job satisfaction level and resignation ideation frequency were measured using visual analog scales.

Over the past four weeks, stress was measured using the 10-item Perceived Stress Scale (PSS-10; Cohen et al., 1983). Total scores range from 0-40, with higher scores indicating higher levels of perceived stress over the past four weeks. The PSS-10 has adequate reliability with Cronbach alpha scores from 0.65 to 0.85 and factorial validity (Lee, 2012). The current Cronbach alpha was 0.88.

Anxiety over the past two weeks was measured using the 7-item Generalized Anxiety Disorder 7 (GAD-7), which measures the severity of anxiety symptoms experienced over the previous two weeks. Total scores range from 7 – 28, with higher scores indicating greater anxiety levels (Spitzer et al., 2006). In initial testing, the Cronbach alpha was 0.92, and the test-retest intraclass correlation was 0.83, indicating adequate reliability (Spitzer et al., 2006). Criterion, construct, and factorial validity were found to be appropriate. The Cronbach alpha for this study was 0.89.

Depression over the past two weeks was measured using the 9-item Patient Health Questionnaire – 9 (PHQ-9) which measures the severity of depression symptoms experienced over the previous two weeks. Total scores range from 0–27, with score ranges for levels of depression severity (Kroenke, 2001). In initial testing, the Cronbach alpha was 0.89 and construct validity was found to be suitable (Kroenke, 2001). The Cronbach alpha for this study was 0.83.

Professional well-being over the past four weeks was measured using the 9-item Nurse Well-being Index (N-WBI). The total score ranges from -2 (lower risk) to 9 (highest risk), with a score of > 2 considered to be an at-risk score (Dyrbye et al., 2018). The seven dichotomous items have demonstrated acceptable internal consistency reliability with values greater than 0.70; convergent and content validity were appropriate greater than 0.90 (Drybe et al., 2010). The internal consistency reliability for the seven dichotomous items on the N-WBI for the current study was 0.59.

Data collection

Study data were collected from January – June 2023 using QuestionPro®, an IRB-approved data collection program for use with human subjects research. Participants answered study surveys at a place and time of their choosing using their personal phone, tablet, or computer. Informed

consent information was provided at the beginning of the survey, and an opt-into/out-of-survey participation question was presented before viewing the study survey. Once the survey closed, the research team maintained the study data in a dual-authenticated, password-protected shared drive accessible only to the study team. Due to the study recruitment methods, an unknown number of NGNs viewed the study survey. Thirty-three individuals provided initial responses to the study survey. Of these, nine discontinued their participation in the survey during the initial questions, and their responses were removed from the study database. The final sample for analysis consisted of data from 24 individuals.

Data Analysis

Continuous parameters are reported as mean ± standard deviation and discrete parameters are reported as n and percent (%). Missing data were found in the demographic and employment-related questions but were less than 5%. To assess normality, Shapiro-Wilk tests were computed on the N-WBI-9, PSS-10, PHQ-9, and GAD-7. Spearman rank-order coefficients were computed to identify associations between continuous variables. An a priori power analysis was conducted using G*Power (Faul et al., 2007). Power calculations were computed using an estimated sample size of 123 participants, a two-sided alpha of .05 and a beta of .20. Although pilot studies by definition are underpowered, adequate power will be achieved if our effect size is greater than f = .25. All tests were two-tailed with a study alpha of .05. Analyses were performed using SPSS 29.0 for Windows.

Results

A total of 24 rural NGNs completed the study survey, with a mean age of 29.6 years (*SD* = 7.03). The study participants mostly were female (91.7%; *n* = 22) and White/Caucasian (70.8%; *n* = 17). Slightly over half of the participants (54.2%; n = 13) possessed a Bachelor of Science in

Nursing and reported spending an average of 9 weeks (*SD* = 5.07) in orientation. See Table 1 for additional demographic and employment characteristics of the sample.

Table 1
Demographic and Work Characteristics of the Sample

	n (%)	**Mean, (SD), Range**
Age (*n* = 24)		29.6 *(7.03)* 23 - 51
Sex (*n* = 24)	Male = 2 (8.3%) Female = 22 (91.7%)	
Race (*n* = 24)	Black / African American = 1 (4.2%) Hispanic / Latino = 4 (16.7%) Asian / Pacific Islander = 2 (8.3%) Caucasian / White = 17 (70.8%)	
RN Entry Degree (*n* = 24)	Associate degree = 11 (45.8%) Bachelor's Degree = 13 (54.2%)	
Weeks Spent in Orientation and Training (*n* = 23)		9 *(5.07)* 4 - 24
RN experience in months (*n* = 24)		12.08 *(6.68)* 4 - 23
Assigned Shift (*n* = 21)	Day = 13 (54.2%) Nights = 8 (33.3%)	
Previous healthcare experience (*n*=23)	No = 10 (41.7%) Yes = 14 (58.3%) • PCT/CNA = 6 (46.2%) • EMT/EMT-P = 3 (23.1%) • LVN/LPN = 2 (15.4%) • Other = 2 (15.3%)	
Years of previous healthcare experience (*n* = 13)		4.77 *(5.52)* 0.5 - 20
Estimated employer hospital beds (*n* = 21)		43.43 *(32.15)* 13 - 104
Miles to work, one way (*n* = 22)		15 *(15.66)* 0.5 - 52

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Frequencies were conducted on the range of job satisfaction and resignation ideation. Many of the participants (62.5%; *n* = 15) reported high levels of job satisfaction (score > 7 out of 10), while only 33.4% (*n* = 8) reported frequent thoughts of resignation (score > 7 out of 10). Frequencies were also conducted on the WBI-9, PSS-10, PHQ-9, and GAD-7. Slightly more than half of the participants (58.4%; *n* = 14) reported scores >2 on the WBI,-9 indicating low well-being. Moderate levels of stress were reported by 58.4% (*n* = 14), and moderate levels of depression and anxiety were reported by 25% (n = 6) and 20.8% (n = 5), respectively. Table 2 offers a complete description of the frequencies of job satisfaction, resignation, and the clinical categories of the N-WBI-9, PSS-10, PHQ-9, and GAD-7.

Table 2
Descriptive Statistics and Clinical Categories of the Instruments

Study Instrument Mean (*SD*) Range		*n (%)*
Job Satisfaction (JS) 6.79 *(2.69)* 1 - 10	Low Satisfaction (1 – 3) Medium Satisfaction (4 - 6) High Satisfaction (7 – 10)	3 (12.5%) 6 (25%) 15 (62.5%)
Resignation Ideation (RI) 5.37 *(3.01)* 1 – 10	Few thoughts of resignation (1 - 3) Moderate thoughts of resignation (4 – 6) Frequent thoughts of resignation (7 - 10)	7 (29.1%) 9 (37.5%) 8 (33.4%)
Nurse-Well-Being Index (N-WBI) 2.79 *(2.16)* -2 - 7	Normal / high levels of well-being (-2 - +2) Low levels of well-being (3 - 9)	10 (41.6%) 14 (58.4%)
Perceived Stress Scale (PSS-10) 17.13 *(6.97)* 5 - 31	Low Stress (0 - 13) Moderate Stress (14 – 26) High Stress (27 – 40)	7 (29.1%) 14 (58.4%) 3 (12.5%)
Patient Health Questionnaire (PHQ-9) 7.08 *(4.68)* 1 - 17	Minimal Depression (0 - 4) Mild Depression (5 - 9) Moderate Depression (10 - 14) Moderately Severe Depression (15 - 19) Severe Depression (20+)	8 (33.3%) 10 (41.7%) 3 (12.5%) 3 (12.5%) 0 (0%)
General Anxiety Disorder (GAD-7)	Minimal Anxiety (0 - 5)	12 (50%)

6.75 *(4.71)* 1 - 16	Mild Anxiety (6 - 10)	7 (29.2%)
	Moderate Anxiety (11 - 15)	4 (16.6%)
	Severe Anxiety (16 - 20)	1 (4.2%)

Spearman's rho correlations were computed among the scores representing job satisfaction, resignation ideation, professional well-being, stress, depression, and anxiety. Higher scores on the well-being index (which indicate lower levels of well-being) were positively associated with higher perceived stress levels ($p = .048$), higher depression scores ($p = .038$), higher anxiety scores ($p = .021$) and more frequent resignation ideation ($p = .005$). Lower scores on the well-being index (which indicate higher levels of well-being) are negatively associated with higher levels of job satisfaction ($p = .03$)

Job satisfaction was found to be negatively associated with depression ($p = .01$). In this sample, stress and anxiety did not have significant relationships with job satisfaction. Increased resignation ideation was negatively associated with job satisfaction ($p < .001$) and positively associated with higher scores on the well-being index (which indicate lower levels of well-being) ($p = .005$) and higher levels of stress ($p = .031$), depression ($p = .005$), and anxiety ($p = .036$). Intercorrelations of these study variables are offered in Table 3.

Table 3
Intercorrelations among study variables

	WBI-9	JS	RI	PSS-10	PHQ-9	GAD-7
Well-being Index-9 (WBI-9)	_	-.442*	.550**	.408*	.427*	.469*
Job Satisfaction (JS)		_	-.748**	-.367	-.513*	-.270
Resignation Ideation (RI)			_	.441*	.553**	.431*
Perceived Stress Scale 10 (PSS-10)				_	.619**	.702**

Patient Health Questionnaire – 9 (PHQ-9)		_	.719**

** Correlation is significant at the 0.01 level (2 tailed)
* Correlation is significant at the 0.05 level (2-tailed)

Spearman's rho correlations were also conducted to explore the relationships among the number of weeks of orientation, the number of months of experience, and the number of hospital beds with the primary study variables of well-being, perceived stress, depression, anxiety, resignation ideation, and job satisfaction. No statistically significant relationships were found between a number of weeks of orientation and well-being (r_s = -.045, p = .840), perceived stress (r_s = -.055, p = .802), depression (r_s = -.066, p = .765), anxiety (r_s = -.122, p = .580), job satisfaction (r_s = -.056, p = .801), or resignation ideation (r_s = -.111, p = .614). No statistically significant relationships were found between number of months of experience and well-being (r_s =, p =), perceived stress (r_s = -.181, p = .396), depression (r_s = -.187, p = .383), anxiety (r_s = 0.049, p = .820), job satisfaction (r_s = -.227, p = .287), or resignation ideation (r_s = .241, p = .256). No statistically significant relationships were found between the number of hospital beds and well-being (r_s = .112, p = .629), perceived stress (r_s = .063, p = .788), depression (r_s = .181, p = .431), anxiety (r_s = .227, p = .323), job satisfaction (r_s = -.094, p = .685), or resignation ideation (r_s = .274, p = .230).

Discussion

This pilot study reports the findings of cross-sectional data collected in early 2023 from a small sample of rural RNs in Texas with less than 24 months of experience. A discussion of selected significant and non-significant results with connections to the literature and implications for nursing preceptors, educators, and nurse leaders follows.

Most participants (62.5%; n = 15) reported high levels of job satisfaction, which was positively associated with professional well-being and negatively associated with depression. This is similar to the findings of Smith et al. (2022), where job satisfaction was also high among nurses working in small rural hospitals in Australia. In this study, stress and anxiety did not have a significant relationship with job satisfaction. Although not specific to rural NGNs, Meyer et al. (2015) also reported that pediatric NGNs' perceived stress was unrelated to job satisfaction. Perhaps system work factors such as the external or work environment in pediatric or rural settings may subtly influence job satisfaction. Job satisfaction in NGNs varies throughout the transition to practice and tends to improve by the end of the first year (Graf et al., 2021; Jarden et al., 2021; Urban et al., 2024).

At the same time, only one-third of the sample reported frequent thoughts of resignation ideation, an encouraging finding. Unsurprisingly, increased resignation ideation was associated with lower levels of professional well-being and higher levels of stress, depression, and anxiety. This is similar to the findings of Urban et al. (2024), where perceived stress levels were a significant predictor of resignation ideation during the pandemic in non-rural NGNs, and the pre-pandemic findings of Africa and Trepanier (2021), where higher levels of job stress, increased workloads, and understaffing in the first year were associated with resignation ideation and lower levels of job satisfaction in non-rural NGNs.

Finally, slightly more than half of the study participants reported a score of >2 on the N-WBI, indicating an "at risk" or low level of professional well-being (Dyrbye et al., 2018). This is a novel finding because research using the N-WBI in rural settings is lacking. In a sample of U.S. nurses, scores higher than two were associated with higher risks of burnout, severe fatigue, poor overall quality of life, recent patient error, and intent to leave their current position (Drybe et al.,

2018). In this study, low levels of professional well-being were associated with more frequent resignation ideation and higher levels of stress, depression, and anxiety. These associations are underscored by the findings in a quantitative systematic review of NGN well-being, where NGNs commonly reported feeling emotional exhaustion and moderate levels of physical and mental health symptoms in the first year of practice (Jarden et al., 2021).

Burnout in rural nurses is associated with lower job satisfaction (Bethea et al., 2020) and increased thoughts of resignation and turnover (Jarden et al. 2021; McNulty et al., 2022). Rural nurse and NGN turnover can destabilize rural areas and create subsequent pressure on remaining employees to increase RN-to-patient ratios or work more shifts to fill the staffing gaps (J.G. Smith et al., 2019; S. Smith et al., 2019). Utilizing temporary or contract RNs is costly for rural hospitals and may worsen pre-existing financial instability (American Hospital Association, 2023). The consequences of burnout for patients include an increased risk of errors and poorer outcomes (NASEM, 2019) in a population that is already likely underserved and marginalized by its rural status (Russell et al., 2021).

Clinical Implications / Significance

Rural nursing preceptors, educators, and nurse leaders are responsible for monitoring and supporting professional development and well-being in NGNs during their transition to professional practice. Transition-to-practice programs can increase retention, reduce turnover costs, and improve patient outcomes (Evans & Cosme, 2023). However, some rural hospitals may lack the financial or staffing resources to offer such a program (Calleja et al., 2019). Existing transition-to-practice programs in rural settings must incorporate evidence-based strategies at the individual and organizational levels to provide more support to promote well-being and address mental health in rural NGNs (Rose et al., 2023). If rural hospitals lack sufficient resources to

provide a transition to practice program, partnerships with nearby academic institutions could be developed to support rural NGN's continued knowledge acquisition and professional well-being.

It is essential for those working with rural NGNs to share that job satisfaction, psychosocial health, and professional well-being will likely vary during their journey to becoming an experienced nurse and that this is a normal experience. The phenomenon of daydreaming, including resignation ideation, is also reported by NGNs in the transition to practice period and may serve as a coping mechanism in response to high-stress levels or other challenges to professional well-being (Urban et al., 2024). As our pilot study has shown, NGNs can also be at risk for burnout. It is essential to acknowledge and manage the early symptoms of burnout in NGNs, and evidence-based programs focused on improving stress management and supporting resilience and mindfulness could be implemented to successfully support NGN well-being (McNulty et al., 2022). Providing support for rural NGN well-being during the transition to practice may help to retain them for the organization and the community and contribute to the maintenance of high-quality, safe patient care in rural settings.

Limitations

This study used convenience sampling of rural NGNs from one southwestern state. The small sample size and lack of diversity may limit the generalizability of the results. Recruiting study participants was challenging due to the limited number of NGNs who elect to work in rural areas and the lack of established means to identify and contact these nurses directly. The Texas Board of Nurses does not make contact lists of nurses available for public or research use (Texas Board of Nursing, n.d.). The survey length (46 questions) may have required too much time for some participants to complete. The cross-sectional, associational design limits causal interference. The effect sizes reflected in the strength of the associations between variables are a study strength.

Recommendations for future research

More research on NGNs transitioning to practice in rural US settings that explicitly explores professional well-being and how this may change over time or with evidence-based interventions is needed. Nursing leaders should consider increasing evidence-based knowledge and skills for rural preceptors supporting newly licensed nurses as they transition to practice in these settings. Partnerships with academic institutions that can provide social support and professional development of NGNs or seek certification for rural residency programs are desirable, increasing retention, reducing turnover costs, and improving patient outcomes.

Conclusion

To the authors' knowledge, this study was the first to explore well-being and its associations with job satisfaction and resignation ideation in rural NGNs. These NGNs may be at a higher risk for lower well-being due to the stressors associated with the transition to practice, potentially reduced resources for training and support during this transition, and the expectations of rural NGNs to care for patients of all ages and acuity levels in a generalist role. Understanding their perspectives can help preceptors, educators, and nurse leaders to develop targeted evidence-based resources that can be delivered by experienced rural nurses and within rural internships during their transition to professional practice.

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Conflicts of Interest

The authors have no conflicts of interest to declare.

References

Africa, L., & Trepanier, S. (2021). The role of the nurse leader in reversing the new graduate nurse intent to leave. *Nurse Leader*, *19*(3), 239–245. https://doi.org/10.1016/j.mnl.2021.02.013

American Hospital Association. (2023). Fast facts U.S. rural hospitals. https://www.aha.org/system/files/media/file/2023/12/Fast-Fact-on-US-Rural-Hospitals-2023-Infographic.pdf

American Hospital Association. (2023). *Improving health care access in rural communities: Obstacles and opportunities*. https://www.aha.org/system/files/media/file/2023/05/aha-statement-to-senate-finance-committee-subcommittee-on-health-on-improving-rural-health-care-access-5-17-2023.pdf

American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders,* (5th ed., Text revision). American Psychiatric Association Publishing.

Anusiewicz, C. V., Shirey, M. R., & Patrician, P. A. (2019). Workplace bullying and newly licensed registered nurses: An evolutionary concept analysis. *Workplace Health & Safety*, *67*(5), 250–261. https://doi.org/10.1177/2165079919827046

Benner, P. (1984). *From novice to expert. Excellence and power in clinical nursing practice.* Addison-Wesley.

Bethea, A., Samanta, D., Kali, M., Lucente, F. C., & Richmond, B. K. (2020). The impact of burnout syndrome on practitioners working within rural healthcare systems. *The American*

Journal of Emergency Medicine, 38(3), 582–588. https://doi.org/10.1016/j.ajem.2019.07.009

Blegen, M., Spector, N., & Lynn, M. (2017). Newly licensed RN retention. *The Journal of Nursing Administration, 47*(10), 508-514. https://doi.org/10.1097/NNA.0000000000000523

Burrows, G.L., Calleja, P., & Cooke, M. (2019). What are the support needs of nurses providing emergency care in rural settings as reported in the literature? A scoping review. *Rural and Remote Health*, 19, 4805. https://www.rrh.org.au/journal/article/4805

Calleja, P., Adonteng-Kissi, B., & Romero, B. (2019). Transition support for new graduate nurses to rural and remote practice: A scoping review. *Nurse Education Today, 76,* 8-20. https://doi.org/10.1016/j.nedt.2019.01.02

Cambridge Dictionary. (n.d.). *Job satisfaction.* https://dictionary.cambridge.org/us/dictionary/english/job-satisfaction

Cohen, S., Kamarck, T., & Mermeistein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*, 386-396.

Duchscher J. B. (2008). A process of becoming: The stages of new nursing graduate professional role transition. *Journal of Continuing Education in Nursing*, *39*(10), 441–480. https://doi.org/10.3928/00220124-20081001-03

Dyrbye, L. N., Johnson, P. O., Johnson, L.M., Satele, D. V., & Shanafelt, T. D. (2018). Efficacy of the Well-Being Index to identify distress and well-being in U.S. nurses. *Nursing Research, 67*(6), 447-455. https://doi.org/10.1097/NNR.0000000000000313

Evans, K. & Cosme, S. (2023). 2024 American nurses credentialing center practice transition accreditation program manual updates. *Journal for Nurses in Professional Development, 39*(5), 287-289. https://doi.org/10.1097/NND.0000000000001008

Fahs, P. S. & Rouhana, N. (2021). Rural health care: Workforce challenges and opportunities. In D.J. Mason, E.L. Dickson, A. Perez, & M.R. McLemore (Eds.), *Policy & Politics in Nursing and Healthcare, 8th ed.* (pp. 437-446). Elsevier.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*, 175-191. https://doi.org/10.3758/BF03193146

Feeg, V. D., Mancino, D. J., & Kret, D. D. (2021). First job workplace stressors for new nurse graduates in their own words. *Nursing Education Perspectives, 43*(1), 30-34. https://doi.org/10.1097/01.NEP.0000000000000894

Graf, A. C., Nattabi, B., Jacob, E., & Twigg, D. (2021). Experiences of Western Australian rural nursing graduates: A mixed method analysis. *Journal of Clinical Nursing, 30*(23-24), 3466–3480. https://doi.org/10.1111/jocn.15849

Han, K., Kim, Y., Lee, H.Y., Cho, H., & Jung, Y.S. (2019). Changes in health behaviours and health status of novice nurses during the first 2 years of work. *Journal of Advanced Nursing, 75*(8), 1648-1656, https://doi.org/10.1111/jan.13947

Health Resources and Services Administration. (2018). 2018 National sample survey of registered nurses. https://data.hrsa.gov/topics/health-workforce/nursing-workforce-dashboards

Hoppe, L., & Clukey, L. (2020). Lived experiences of new nurse graduates in critical access hospitals. *Nursing Forum, 56*(2), 255-263. https://doi.org/10.1111/nuf.12530

Jarden, R. J., Jarden, A., Weiland, T.J., Taylor, G., Bujalka, H., Brockenshire, N. & Gerdtz, M.F. (2021). New graduate nurse well-being, work well-being and mental health: A quantitative systematic review. *International Journal of Nursing Studies, 121*, 1-35. https://doi.org/10.1016/j.ijnurstu.2021.103997

Kroenke, K., Spitzer, R. L. & Williams, J. B. W. (2001). The PHQ-9. Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*(9), 606-613. https://doi.org/10.1046%2Fj.1525-1497.2001.016009606.x

Lea, J., & Cruickshank, M. (2017). The role of rural nurse managers in supporting new graduate nurses in rural practice. *Journal of Nursing Management*, *25*, 176-183. https://doi.org/10.1111/jonm.12453

Lee, E. (2012). Review of the psychometric evidence of the perceived stress scale. *Asian Nursing Research, 6*(4), 121-127. https://doi.org/10.1016/j.anr.2012.08.004

McNulty, D. S., LaMonica-Way, C., & Senneff, J. A. (2022). The impact of mindfulness on stress and burnout of new graduate nurses as a component of a nurse residency program. *The Journal of Nursing Administration, 52*(4), E12–E18. https://doi.org/10.1097/NNA.0000000000001137

Meyer, R., Li, A., Klaristenfeld, J., & Gold, J. (2015). Pediatric novice nurses: Examining compassion fatigue as a mediator between stress exposure and compassion satisfaction, burnout, and job satisfaction. *Journal of Pediatric Nursing, 30*(1), 174-183. https://doi.org/10.1016/jpedn.2013.12.008

National Academies of Sciences, Engineering, and Medicine. (2019). *Taking action against clinician burnout: A systems approach to professional well-being*. The National Academies Press. https://doi.org/10.17226/25521

National Rural Healthcare Association. (2024). About rural health care. https://www.ruralhealth.us/about-us/about-rural-health-care

Nursing Solutions Inc. (2023). 2023 NSI National health care retention & RN staffing report. https://www.nsinursingsolutions.com/Documents/Library/NSI_National_Health_Care_Retention_Report.pdf

Rose, H., Skaczkowski, G., & Gunn, K. M. (2023). Addressing the challenges of early career rural nursing to improve job satisfaction and retention: Strategies new nurses think would help. *Journal of Advanced Nursing*, *79*(9), 3299–3311. https://doi.org/10.1111/jan.15636

Russell, D., Mathew, S., Fitts, M., Liddle, Z., Murakami-Gold, L., Campbell, N., Ramjan, M., Zhao, Y., Hines, S., Humphreys, J. S., & Wakerman, J. (2021). Interventions for health workforce retention in rural and remote areas: a systematic review. *Human Resources for Health*, *19*(1), 103. https://doi.org/10.1186/s12960-021-00643-7

Smith, J. G., Plover, C. M., McChesney, M. C., & Lake, E. T. (2019). Isolated, small, and large hospitals have fewer nursing resources than urban hospitals: Implications for rural health policy. *Public Health Nursing, 36*(4), 469–477. https://doi.org/10.1111/phn.12612

Smith, S., Sim, J., & Halcomb, E. (2019). Nurses' experiences of working in rural hospitals: An integrative review. *Journal of Nursing Management*, *27*(3), 482–490. https://doi.org/10.1111/jonm.12716

Smith, S., Lapkin, S., Halcomb, E., & Sim, J. (2023). Job satisfaction among small rural hospital nurses: A cross-sectional study. *Journal of Nursing Scholarship*, *55*(1), 378–387. https://doi.org/10.1111/jnu.12800

Spitzer R.L., Kroenke K., Williams J.B.W., Löwe B. (2006). A brief measure for assessing Generalized Anxiety Disorder: The GAD-7. *Archives of Internal Medicine, 166*(10), 1092–1097. https://doi.org/10.1001/archinte.166.10.1092

Texas Board of Nursing. (n.d.). *Sale of Computerized Lists Discontinued on September 1, 2023 in Response to Changes to the Public Information Act*. https://www.bon.texas.gov/forms_nurse_database_electronic_file_order.asp.html

Texas Center for Workforce Studies. (2022). *2022 Hospital nurse staffing study. Rural and critical access hospitals.* Texas Health and Human Services, Texas Department of State Health Services. https://www.dshs.texas.gov/sites/default/files/chs/cnws/HNSS/2022/2022_HNSS_RuralCAH_accessible.pdf

Texas Organization of Rural and Community Hospitals. (2022). *Ten things to know about Texas rural hospitals.* https://www.torchnet.org/uploads/1/1/9/5/119501126/torch_10_things_fact_sheet.pdf

Towner, E., East, L., & Lea, J. (2022). The experiences of new graduate nurses caring for the deteriorating patient in rural areas: An integrative review. *Collegian, 29*, 245-251. https://doi.org/10.1016/j.colegn.2021.12.003

United States Department of Agriculture. (2021). Rural America at a glance. https://www.ers.usda.gov/webdocs/publications/102576/eib-230.pdf

Urban, R., Rogers, M., Eades, T., Allard, P., Porter, M., & Cipher, D. (2022). Resilience, stress, anxiety, and depression: Exploring the mental health of new graduate nurses transitioning to practice during COVID-19. *Journal of Continuing Education in Nurses, 53*(12), 533-543. https://doi-org.ezproxy.uta.edu/10.3928/00220124-20221107-05

Urban, R.W., Porter, M.T., & Cipher, D (2024). Exploring new graduate nurses' perceptions of factors influencing job satisfaction and resignation ideation during COVID-19. J*ournal for Nurses in Professional Development*. 40(1), p E27-E33. https://doi.org/10.1097/NND.0000000000001015

von Elm, E., Altman, D. G., Egger, M., Pocock, S. J., Gøtzsche, P. C., Vandenbroucke, J. P., & STROBE Initiative. (2007). Strengthening the reporting of observational studies in epidemiology (STROBE) statement: Guidelines for reporting observational studies. *British Medical Journal (Clinical research ed.)*, *335*(7624), 806–808. https://doi.org/10.1136/bmj.39335.541782.AD