

A STUDY ON THE IMPACT OF WORK STRESS ON NURSES WITH A REFERENCE TO MOOD SWING

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ABSTRACT

Work stress in nursing is a globally documented occupational health challenge that carries far-reaching consequences for individual wellbeing, patient safety, and healthcare system sustainability. The present empirical study investigates the impact of occupational work stress on nurses with specific reference to its manifestation as mood swings a dimension of affective instability that has received comparatively limited scholarly attention in the Indian nursing context. A structured questionnaire was administered to 150 nurses selected through stratified random sampling from government and private hospitals in Chhattisgarh, India. The instrument measured five dimensions of work stress workload and time pressure, role ambiguity and conflict, emotional demands, physical work environment, and interpersonal relationships alongside a validated mood swing severity scale. Data were analysed through descriptive statistics, Pearson's correlation analysis, and one-way ANOVA. The findings reveal that 62.67% of respondents experienced high levels of occupational stress, while 58.67% reported severe mood swings. A strong and statistically significant positive correlation was established between overall work stress and mood swing severity ($r = 0.791$, $p < 0.001$). ANOVA results indicated significant differences in stress and mood swing levels by shift pattern, years of experience, and hospital type. The study concludes that work stress and mood dysregulation are systemic rather than individual phenomena in the nursing profession, demanding structural organizational reform and targeted mental health intervention. The findings contribute to the growing body of evidence linking emotional labour, workload overload, and affective instability in healthcare workers.

Keywords: *Work Stress¹, Mood Swing², Nurses³, Occupational Health⁴, Emotional Labour⁵, Nursing Burnout⁶, Healthcare Workers⁷.*

I. INTRODUCTION

Nursing is widely regarded as one of the most emotionally and physically demanding professions in the modern healthcare ecosystem. Nurses function as the primary interface between patients and the clinical system, bearing responsibility for direct patient care, medication administration, procedural execution, and a continuous flow of interpersonal and emotional engagement. Unlike many other healthcare professionals, nurses maintain sustained proximity to patients across extended work shifts, exposing them to a broader and more intense range of human suffering, clinical emergencies, and existential distress than virtually any other occupational category. It is within this context that the phenomenon of work-related stress in nursing must be understood not as an incidental or individual vulnerability, but as a structural and systemic feature of the profession's occupational landscape. The World Health Organization (WHO) has identified nursing stress as a significant threat to healthcare workforce sustainability globally, noting that unmanaged occupational stress contributes to elevated rates of burnout, absenteeism, turnover intention, medication errors, and compromised patient outcomes [1]. In India, where the nurse-to-population ratio remains significantly below the WHO-recommended standard of three nurses per 1,000 people, the structural preconditions for occupational stress are particularly acute [2]. The resulting burden falls disproportionately on individual nurses, who must absorb the consequences of systemic resource shortfalls through intensified personal labour a dynamic that generates both quantitative overload and qualitative emotional demands of considerable magnitude.

A. Work Stress in the Nursing Context

Work stress, in the occupational health literature, is broadly defined as the harmful physical and emotional responses that occur when the requirements of a job do not match the capabilities, resources, or needs of the worker [3]. In the nursing context, this mismatch is operationalised across multiple dimensions: the volume of clinical tasks exceeds available time; the emotional demands of caregiving outpace available coping resources; role expectations from multiple hierarchical stakeholders produce conflicting obligations; and the physical environment of the hospital intensifies rather than mitigates the experience of

pressure. Karasek's Demand-Control-Support Model [4], one of the most influential frameworks in occupational stress research, provides a theoretical architecture for understanding nursing stress: nurses typically occupy the 'high strain' quadrant, characterised by high job demands and low decision-making latitude a combination associated with the most adverse health and psychological outcomes. The Effort-Reward Imbalance Model [5] further illuminates the motivational dimension of nursing stress, identifying the discrepancy between the high effort nurses invest and the relatively modest organizational rewards they receive as a potent source of chronic psychological strain. These theoretical frameworks have been empirically validated across a wide range of nursing population studies, from the landmark work of Aiken and colleagues on hospital staffing and nurse outcomes [6] to more recent meta-analyses documenting the global prevalence and consequences of nursing burnout [7].

B. Mood Swing as an Affective Consequence of Occupational Stress

Mood swings characterized by rapid, disproportionate, and poorly controlled shifts in emotional state represent one of the most clinically significant yet empirically understudied affective consequences of sustained occupational stress in nursing. While burnout and job dissatisfaction have received extensive scholarly attention as stress outcomes in the nursing literature, mood dysregulation occupies a less well-defined conceptual and empirical space, despite its direct implications for both nurse wellbeing and the quality of patient care. The neurobiological basis of the stress-mood relationship is well established: chronic exposure to occupational stressors activates the hypothalamic-pituitary-adrenal (HPA) axis, elevating cortisol levels in ways that progressively impair prefrontal cortical regulation of the limbic system [8]. This biological mechanism translates organizational stressors into affective instability, reducing the nurse's threshold for emotional dysregulation and increasing the frequency and intensity of mood fluctuations. Hochschild's emotional labour theory [9] provides a complementary psychological framework, identifying the sustained practice of surface acting the suppression of genuine emotional states to project professional composure as a depletion mechanism that leaves nurses particularly vulnerable to mood dysregulation during and after work shifts. The spillover of work-related negative affect into personal and domestic life, documented by Netemeyer and colleagues [10] and others in the work-family interference literature, further compounds the social consequences of nursing-related mood swings, affecting not only the nurse but their immediate relational environment.

C. Rationale and Objectives of the Study

Despite the theoretical and clinical significance of the stress-mood relationship in nursing, empirical studies specifically examining mood swings as a dependent outcome of work stress particularly within the Indian nursing context remain scarce. The majority of Indian nursing stress studies have focused on burnout, job satisfaction, or intent to leave, while mood dysregulation has been treated, at best, as a subsidiary symptom rather than a primary outcome variable of independent scholarly interest. This study addresses that gap by conducting a focused empirical investigation of work stress dimensions and their relationship to mood swing severity among nurses in Chhattisgarh. The specific objectives are: (i) to assess the prevalence and intensity of work stress across its principal dimensions among the sampled nurses; (ii) to measure the severity of mood swings experienced by nurses; (iii) to determine the nature and strength of the relationship between work stress and mood swings; and (iv) to identify significant variations in these outcomes across demographic and professional subgroups. The study is guided by the primary hypothesis that work stress is positively and significantly associated with mood swing severity among nurses.

II. REVIEW OF RELATED LITERATURE

The empirical literature on work stress in nursing is extensive, spanning decades of research across diverse healthcare systems and cultural contexts. Early foundational studies by Numerof and Abrams [11] established that nurses consistently report higher levels of occupational stress than workers in comparable human service professions, attributing this differential to the unique combination of life-and-death responsibility, sustained emotional engagement, and organisational hierarchy that characterises hospital nursing. Gray-Toft and Anderson's Nursing Stress Scale [12], developed in the early 1980s and subsequently adapted across numerous cultural contexts including India, identified seven primary stress domains: workload, death and dying, conflict with physicians, inadequate preparation, lack of support, conflict with other nurses, and uncertainty concerning treatment. The continued relevance of these categories across four decades of nursing research underscores the structural persistence of the stressors they capture.

More recent research has expanded this foundational framework to incorporate the emotional labour dimension of nursing stress. Szczygiel and Mikolajczak [13] demonstrated that nurses who engaged in habitual surface acting displaying emotions incongruent with their actual felt

states reported significantly higher emotional exhaustion, more frequent mood disturbances, and lower quality interpersonal interactions with patients, compared to nurses who employed deep acting strategies. This finding is consistent with the broader emotional regulation literature and underscores the importance of organizational cultures that permit authentic emotional expression rather than enforcing emotional performance norms. Kim and colleagues [14] found in a Korean nursing sample that emotional exhaustion mediated the relationship between emotional demands and affective instability, suggesting a sequential pathway from job stressor to resource depletion to mood dysregulation.

Within the Indian context, Sharma and Dhar [15] conducted a study of 200 nurses across tertiary care hospitals in Delhi, finding burnout prevalence of 68% and reporting significant associations between workload, role conflict, and depressive symptomatology. Priyadharshini and Krishnakumar [16] examined nursing stress in Tamil Nadu and documented that 72% of respondents reported moderate to high stress, with emotional demands and inadequate staffing identified as the primary drivers. Basu and colleagues [17] investigated the relationship between occupational stress and psychological wellbeing among nurses in West Bengal, finding significant inverse correlations between stress scores and measures of positive affect. While these studies provide valuable contextual evidence, none focuses specifically on mood swings as a discrete outcome variable, representing the gap that the present study seeks to address.

On the subject of shift work and its relationship to nursing stress, Knutsson's comprehensive review [18] established that night shift workers face a distinctive stress profile, characterized by circadian disruption, social isolation, and reduced access to organizational support resources. Harrington [19] further documented the association between night shift nursing and elevated rates of anxiety, irritability, and affective instability, consistent with the chronobiological literature on the mood-modulating effects of sleep-wake cycle disruption. The early-career vulnerability documented in the present study's findings is anticipated by Duchscher's concept of 'transition shock' [20], which describes the profound psychological disruption experienced by newly qualified nurses as they encounter the gap between idealized training expectations and clinical reality. The Conservation of Resources Theory [21], developed by Hobfoll, provides an integrative framework for understanding how the simultaneous depletion of multiple resource types temporal, physical, emotional, and social

produces the cascading psychological consequences, including mood dysregulation, documented among highly stressed nursing populations.

III. RESEARCH METHODOLOGY

The present study adopts a quantitative, cross-sectional research design grounded in the positivist epistemological tradition, which holds that social phenomena such as occupational stress and mood dysregulation are measurable, quantifiable constructs amenable to statistical analysis and hypothesis testing. This design was selected as the most appropriate methodology for achieving the study's primary objectives of prevalence estimation, relationship testing, and subgroup comparison. The population of the study comprises all registered nurses employed in hospitals across Chhattisgarh, India. A stratified random sampling strategy was employed to ensure proportional representation across the two primary strata: government hospitals and private hospitals. Within each stratum, simple random sampling was used to select individual respondents. The final sample comprised 150 nurses 90 from government hospitals and 60 from private hospitals a size determined through power analysis to provide adequate statistical power ($\beta = 0.80$) for detecting medium-effect correlations at the 0.05 significance level. Informed consent was obtained from all participants prior to data collection, and respondents were assured of anonymity and the confidentiality of their responses. The study received ethical clearance from the institutional review committee.

The primary data collection instrument was a structured questionnaire composed of three sections. Section A captured demographic and professional information, including age, gender, educational qualification, type of hospital, years of experience, and shift pattern. Section B comprised a 20-item Work Stress Scale measuring five dimensions workload and time pressure (4 items), role ambiguity and role conflict (4 items), emotional demands (4 items), physical work environment (4 items), and interpersonal relationships (4 items) each item rated on a five-point Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree). Section C comprised a 20-item Mood Swing Severity Scale assessing frequency of mood changes, emotional irritability, anxiety and restlessness, loss of motivation, and sleep-related emotional disturbances. The content validity of both scales was established through expert review by five academics specialising in organizational behaviour and nursing management. Reliability analysis confirmed high internal consistency for the Work Stress Scale

(Cronbach's $\alpha = 0.887$) and the Mood Swing Scale (Cronbach's $\alpha = 0.874$), both exceeding the conventionally accepted threshold of 0.70.

Data were collected over a six-week period through direct administration of questionnaires during nursing staff meetings and off-duty periods, achieving a response rate of 94.3% from the initially approached sample. Completed questionnaires were screened for completeness, and four responses with more than 10% missing data were excluded, resulting in the final analytical sample of 150. Statistical analysis was conducted using SPSS version 26.0. Descriptive statistics means, standard deviations, and frequency distributions were computed for all scale items and composite indices. Composite stress and mood swing indices were computed as the mean of all respective scale items, with higher scores indicating greater stress or mood swing severity. Pearson's product-moment correlation was employed to examine relationships between continuous variables. One-way ANOVA was used to compare mean scores across categorical subgroups, with Tukey's Honest Significant Difference (HSD) post-hoc test applied where omnibus F-tests yielded statistical significance. The level of significance was set at $\alpha = 0.05$ for all inferential analyses.

IV. DATA COLLECTION AND ANALYSIS

This section presents the results of the empirical analysis in tabular form, systematically addressing the study's objectives. Five tables are presented covering the demographic profile of respondents, work stress dimension scores, mood swing severity distribution, Pearson's correlation matrix, and ANOVA results by professional subgroups.

Table 1: Demographic and Professional Profile of Respondents (N = 150)

Variable	Category	Frequency (n)	Percentage (%)
Age Group	20–30 Years	52	34.67
	31–40 Years	58	38.67
	41–50 Years	28	18.67
	Above 50 Years	12	8.00
Gender	Female	118	78.67
	Male	32	21.33
Work	< 2 Years	34	22.67

Experience			
	2–5 Years	47	31.33
	6–10 Years	41	27.33
	Above 10 Years	28	18.67
Hospital Type	Government	90	60.00
	Private	60	40.00
Shift Pattern	Morning Shift	62	41.33
	Evening Shift	48	32.00
	Night Shift	40	26.67

Table 1 presents the demographic and professional composition of the sample. The majority of respondents (38.67%) were in the 31–40 age group, with 78.67% female consistent with the feminised nature of the nursing workforce in India. The largest experience category was 2–5 years (31.33%), indicating a predominantly early-to-mid-career sample. Government hospital nurses accounted for 60% of the sample, and 26.67% were engaged in night shift work, a professionally significant subgroup given the additional physiological and psychological burdens associated with circadian-disruptive schedules.

Table 2: Descriptive Statistics – Work Stress Dimensions and Composite Index (N = 150)

Work Stress Dimension	Min.	Max.	Mean (M)	Std. Dev. (SD)
Workload and Time Pressure	2.25	5.00	4.09	0.80
Role Ambiguity and Role Conflict	1.50	5.00	3.51	0.99
Emotional Demands	2.00	5.00	4.05	0.82
Physical Work Environment	1.75	5.00	3.78	0.91
Interpersonal Relationships	1.50	5.00	3.62	0.94
Overall Work Stress Index	1.85	5.00	3.81	0.79
Overall Mood Swing Index	1.60	5.00	3.74	0.83

Table 2 presents the descriptive statistics for each work stress dimension and the composite indices. Workload and time pressure recorded the highest mean score ($M = 4.09$, $SD = 0.80$), followed by emotional demands ($M = 4.05$, $SD = 0.82$), indicating that quantitative overload and the psychological burden of caregiving represent the most intense stressors in the sample.

The physical work environment ($M = 3.78$) and role ambiguity ($M = 3.51$) dimensions also returned scores indicative of moderate-to-high stress. The Overall Work Stress Index mean of 3.81 and the Mood Swing Index mean of 3.74 both situated firmly in the high range of the five-point scale establish the central empirical context of the study: nurses in this sample are experiencing substantial occupational stress and significant affective instability concurrently.

Table 3: Distribution of Respondents by Work Stress Level and Mood Swing Severity

Category	Score Range	Freq. (n)	% (Work Stress)	% (Mood Swing)	Cumulative %
Low / Mild	1.00–2.33	12 / 14	8.00	9.33	8.00 / 9.33
Moderate	2.34–3.66	44 / 48	29.33	32.00	37.33 / 41.33
High / Severe	3.67–5.00	94 / 88	62.67	58.67	100.00
Total		150	100.00	100.00	

Table 3 presents the distribution of respondents across stress and mood swing severity categories. The convergence of high stress and severe mood swing prevalence is structurally apparent: 62.67% of respondents fell in the high stress category while 58.67% reported severe mood swings. Cumulatively, over 92% experienced moderate to high work stress and over 90% reported moderate to severe mood swings. The near-parallel escalation across both distributions with only 8% and 9.33% in the low/mild categories respectively provides a compelling initial indication of the systematic co-occurrence of these two constructs, formally tested in the correlation analysis that follows.

Table 4: Pearson's Correlation Matrix – Work Stress Dimensions and Mood Swing Index

Variable	WL	RA	ED	PE	IR
Workload (WL)	1.000				
Role Ambiguity (RA)	0.541**	1.000			
Emotional Demands (ED)	0.623**	0.512**	1.000		
Physical Environment (PE)	0.489**	0.468**	0.537**	1.000	
Interpersonal Relations (IR)	0.558**	0.601**	0.574**	0.493**	1.000
Mood Swing Index (MSI)	0.712**	0.583**	0.748**	0.511**	0.632**

**** Correlation is significant at the 0.01 level (2-tailed). WL = Workload; RA = Role Ambiguity; ED = Emotional Demands; PE = Physical Environment; IR = Interpersonal Relations; MSI = Mood Swing Index.**

Table 4 presents the Pearson's correlation matrix. All five work stress dimensions are positively and significantly correlated with the Mood Swing Index at the 0.01 level. Emotional Demands showed the strongest correlation with mood swings ($r = 0.748$), followed by Workload ($r = 0.712$), Interpersonal Relations ($r = 0.632$), Role Ambiguity ($r = 0.583$), and Physical Environment ($r = 0.511$). The inter-dimensional correlations among the stress dimensions themselves range from moderate to strong ($r = 0.468$ to 0.623), indicating that stress dimensions tend to co-occur within individuals but are conceptually and statistically distinct justifying the multi-dimensional operationalization of work stress employed in this study. The overall Work Stress Index correlation with mood swings of $r = 0.791$ ($p < 0.001$) provides unambiguous statistical support for the primary hypothesis of the study.

Table 5: One-Way ANOVA – Work Stress and Mood Swing Index by Professional Subgroups

Grouping Variable	Group	N	Stress Mean	Mood Mean	F Value	Sig. (p)
Shift Pattern	Morning	62	3.61	3.54	18.74	0.000**
	Evening	48	3.74	3.69		
	Night	40	4.22	4.18		
Experience	< 2 Yrs	34	4.12	4.21	11.27	0.000**
	2–5 Yrs	47	3.94	3.88		
	6–10 Yrs	41	3.71	3.61		
	> 10 Yrs	28	3.28	3.28		
Hospital Type	Govt.	90	4.02	3.94	16.58	0.000**
	Private	60	3.61	3.51		

**** Significant at $p < 0.01$ level. Post-hoc comparisons conducted using Tukey's HSD test.**

Table 5 presents the one-way ANOVA results comparing mean work stress and mood swing scores across three professional grouping variables. All three ANOVAs yielded statistically significant F-values at the 0.01 level. For shift pattern, night shift nurses recorded substantially higher stress ($M = 4.22$) and mood swing ($M = 4.18$) means compared to morning shift nurses (stress $M = 3.61$; mood $M = 3.54$), a difference consistent with the known physiological and psychological consequences of circadian rhythm disruption. For work experience, early-career nurses (< 2 years) reported the highest stress ($M = 4.12$) and mood swing ($M = 4.21$) scores, with a progressive decline across experience levels nurses with more than 10 years of experience recorded the lowest means ($M = 3.28$ for both indices), suggesting that professional experience confers protective effects on occupational stress and affective stability. For hospital type, government hospital nurses reported significantly higher stress ($M = 4.02$) and mood swing ($M = 3.94$) scores compared to private hospital counterparts ($M = 3.61$ and $M = 3.51$ respectively), reflecting structural differences in staffing, resource availability, and organizational support between the two sectors.

V. DISCUSSION

The empirical findings of the present study yield several critical insights that warrant contextualisation within the broader theoretical and empirical literature. The study's most fundamental finding that 62.67% of nurses experienced high occupational stress and 58.67% reported severe mood swings reflects a structural rather than idiosyncratic condition. The near-universal co-occurrence of elevated stress and significant mood dysregulation across the sample (over 90% in both indices at moderate-to-severe levels) constitutes a systemic occupational health emergency that cannot be addressed through individual-level stress management interventions alone. This finding is consistent with the conclusions of Aiken et al. [6], whose landmark international multisite study established that nurse-to-patient ratios are the primary structural determinant of nursing burnout and adverse patient outcomes, and with the meta-analytic work of Dall'Ora and colleagues [22], who found that shift length and staffing adequacy are the most robust predictors of nursing fatigue and emotional exhaustion across diverse healthcare systems. The present study extends this evidence base by demonstrating that these structural stressors translate not only into burnout and fatigue but into clinically significant affective instability.

The emergence of emotional demands as the stress dimension most strongly correlated with mood swings ($r = 0.748$) merits particular critical attention. This finding represents a more

specific claim than the general emotional exhaustion-burnout relationship documented in the Maslach Burnout Inventory literature [23], because it links a specific organisational stressor (emotional demands) to a specific affective outcome (mood swing severity) with a correlation coefficient that exceeds the typical range reported in general burnout studies ($r = 0.50-0.65$). The mechanism most plausibly underlying this stronger-than-average relationship is the emotional dissonance construct theorized by Hochschild [9] and empirically operationalized by Brotheridge and Grandey [24]: when nurses are systematically required to suppress genuine emotional responses particularly responses to death, patient suffering, and clinical failure the accumulation of unprocessed emotional experience depletes regulatory resources at a faster rate than workload stress alone, generating a lower threshold for affective dysregulation. This interpretation is supported by the work of Gross and John [25] on expressive suppression, which demonstrates that habitual suppression of negative emotions increases physiological arousal, amplifies the subjective experience of negative affect, and reduces positive affect precisely the combination of processes that produces mood swings. Comparing the present results with Sharma and Dhar's [15] Indian nursing study, which found burnout prevalence of 68% in Delhi, the present study's 62.67% high stress prevalence is slightly lower but methodologically distinct: the Sharma and Dhar study used an exhaustion-based burnout scale, while the present study uses a multidimensional stress index. The difference is therefore attributable to measurement approach rather than genuine population difference. More directly comparable is Priyadharshini and Krishnakumar's [16] Tamil Nadu study, which found 72% moderate-to-high stress prevalence somewhat higher than the present study's 92% for the same category. This difference may reflect sample composition: the Tamil Nadu study drew exclusively from tertiary teaching hospitals with high patient complexity, while the present study includes both government and private hospitals with a wider range of clinical environments. The night shift findings of the present study align closely with Harrington's [19] systematic review, which reported effect sizes for the night shift-affective instability relationship in the $r = 0.45-0.70$ range; the present study's within-ANOVA mean difference corresponds to an estimated effect size (Cohen's d) of approximately 0.82, indicative of a large effect and consistent with the upper range of Harrington's findings.

The experience-based gradient in mood swing severity with early-career nurses reporting the most severe mood instability replicates and extends Duchscher's [20] qualitative description of transition shock in newly qualified nurses. Where Duchscher's work was based on

interviews and described this transition primarily in narrative terms, the present study quantifies the affective dimension of the phenomenon for the first time in the Indian context. The mean difference in mood swing scores between nurses with less than two years and those with more than ten years of experience (4.21 vs. 3.28) represents a clinically meaningful gap that is statistically significant and practically consequential for the design of induction and mentoring programmes. This finding is also consistent with the Conservation of Resources Theory's [21] prediction that individuals who have not yet accumulated a sufficient resource base social capital, coping repertoire, professional identity strength, organizational familiarity are more vulnerable to the cascading resource loss spirals that produce escalating psychological distress. The higher stress and mood swing levels in government hospitals, relative to private hospitals, confirm patterns documented by Basu and colleagues [17] and are attributable to the structural conditions of the public healthcare sector: chronic understaffing, high patient volumes, and limited administrative support. This sector-based differential is not merely a statistical finding but a policy signal public sector nursing environments are structurally more stressogenic than their private counterparts, and any occupational health strategy for nursing must acknowledge and respond to this differential.

VI. CONCLUSION

This study provides robust empirical evidence that work stress and mood swings are systematically co-occurring, structurally driven occupational health challenges in the nursing profession in Chhattisgarh, India. The strong positive correlation between overall work stress and mood swing severity ($r = 0.791$, $p < 0.001$), the dominant role of emotional demands and workload overload as stress drivers, and the significant variation in outcomes by shift pattern, work experience, and hospital type together constitute a coherent and policy-relevant empirical portrait of nursing occupational health in this context. The findings challenge the individualisation of nursing stress and locate its primary determinants in organizational, structural, and systemic factors nurse-to-patient ratios, shift scheduling norms, emotional labour management practices, and public sector resource adequacy. The study's contributions are threefold: it establishes mood swing severity as a valid and sensitive outcome variable for occupational health research in nursing; it provides quantified evidence of the emotional labour-mood dysregulation pathway in an Indian nursing population; and it identifies early-career nurses and night shift workers as specific high-risk subpopulations requiring targeted organisational intervention. Future research should extend these findings through longitudinal

designs capable of establishing causal directionality, multi-state comparative frameworks, and intervention studies testing the efficacy of structured emotional regulation programmes on both stress and mood outcomes in nursing populations.

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