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Occupational Stress and Caring Behavior Among Nurses in a Private Hospital in Henan, China

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ABSTRACT

The research team conducted their study by measuring both occupational stress and caring behavior of hospital staff nurses at private medical facilities in Henan Province China. The research evaluated staff nurse perceptions of occupational stress and caring behavior together with their relationship patterns and determined what impact age, sex, marital status and work experience at the hospital had on these variables. A descriptive-correlational research approach supported the study that selected 309 nurses through stratified random sampling methods. Three primary sections were incorporated in the validated questionnaire that employed for data collection: demographic profile as well as occupational stress domains across six areas together with caring behavior dimensions across three areas. Internal reliability of the questionnaire measured by Cronbach's alpha value exceeded 0.85. Consistent analysis of the data included descriptive statistics and Pearson's correlation and chi-square tests and normality tests. Staff members from the surveyed group showed mostly medium-high occupational stress which increased most prominently regarding their workload conditions and their limited availability for leave. Research results demonstrated that occupational stress showed a substantial positive relationship ($r = 0.964$) at $p < 0.001$ with caring behavior. Single and inexperienced nurses under the age of 30 exhibit lower levels of caring behavior on the nursing attitude scale. The research findings indicate reduction of occupational distress through purposeful interventions leads to enhanced nursing care practices. The data shows that institutional reforms with subsequent studies should be implemented.

Keyword: *Occupational Stress, Caring Behavior, Nurses, China, Hospital Nursing, Workplace Well-being*

1. INTRODUCTION

The foundation of excellent nursing practice depends on the practice of caring behavior. Nursing care includes physical patient care activities along with providing emotional support and psychological backing and maintaining interpersonal relationships (Pribadi and Herwan, 2019). The high-pressure hospital environment of Chinese hospitals creates increasing difficulty for nurses to provide caring behaviors because of occupational stress in their fields. Occupational stress takes the form of detrimental physical reactions and emotional responses between work requirements and employee capabilities, resources or needs according to Zabin et al. (2023). The main stress factors which affect nurses in Chinese hospitals such as those found in Henan Province include prolonged work shifts, shortages of staff and workplace aggression and problems associated with medical leave (Li et al., 2020). Nurses experience daily multiple challenges because of unmanaged caring stress which leads to both poor communication performance and practice limits and weakened patient advocacy efforts (Goudarzian et al., 2024). Numerous work demands create substantial hurdles for nurses who need to practice humanistic care at its highest level to achieve quality patient results (Huang et al., 2021).

The research objective focuses on connecting occupational stress factors with nursing caring practice evaluations of personnel in hospitals throughout the Henan province. The research investigates the way demographic traits consisting of worker age along with sex makeup and marital status and hospital nursing duration affect nurses. The research focuses on stress factors that directly harm caring behavior to build essential insights which both nursing administrators and policymakers should use when creating nurse support initiatives. The improvement of nursing work environments will benefit nurse health and create more reliable patient care according to Schlak et al. (2022).

The number of Chinese nurses experiencing occupational stress has increased based on recent research especially among staff members who work in private hospitals which have restricted staffing support (Dong et al., 2023; Wang et al., 2024). The research supports worldwide evidence about healthcare conditions and exposes the specific Chinese healthcare system limitations that include unclear organizational structure and inadequate resources for mental health support of nursing staff

2. METHODOLOGY

2.1 Research Design

A descriptive-correlational research approach helped researchers study the relationship between workplace stressors and nurse deliverance of care practices. The appropriate research design allowed the researcher to evaluate variable relationships without changing any variables.

2.2 Research Locale and Population of the Study

Research activity took place within a private hospital operating in Henan Province of China. The hospital was chosen for this study since it offered convenient location and a large number of nurses which met the research requirements for subject selection. The survey involved all full-time staff nurses working at the hospital at present.

2.3 Sampling Technique and Sample Size

A stratified random sampling technique was used to ensure representation across different hospital departments. Based on the total accessible population of staff nurses, the final sample size was determined to be 309 respondents, allowing for stronger generalizability and statistical reliability.

2.4 Research Instrument

The main research tool was a validated questionnaire divided into three parts:

- Demographic Profile – age, sex, marital status, and years of hospital nursing experience
- Occupational Stress – consisting of six domains: work demands, coworker support, workplace violence, hazards, difficulty taking leave, and powerlessness
- Caring Behavior – covering physical, psychological, and interpersonal dimensions (knowing and respecting the patient)

The instrument was validated by three field experts and demonstrated high internal consistency, with a Cronbach's alpha > 0.85.

Ethical Considerations

Approval was secured from the Trinity University of Asia Ethics Review Committee and from the hospital's Office of the Chief Nursing Officer in Henan. Informed consent was obtained from all participants. Participation was voluntary, and anonymity and confidentiality were strictly maintained. The study posed minimal risk, and participants were assured that no harm would result from their involvement.

Data Gathering and Statistical Analysis

Self-administered surveys were distributed and collected during scheduled shifts. Data were encoded and analyzed using descriptive statistics, Pearson's correction, and chi-square tests. A test of normality was conducted to determine the appropriate statistical tests.

3. RESULTS

3.1 Demographic Profile

This section presents the demographic characteristics of the respondents, including age, sex, marital status, and years of hospital nursing experience. These variables are essential to understanding the background of the nurses who participated in the study and how their profiles may relate to occupational stress and caring behavior.

Table 1 shows that the majority of respondents were within the 20–25 age group, comprising 225 nurses or 72.80% of the total population. This was followed by 35 nurses (11.30%) aged 26–30 and 49 nurses (15.90%) aged 31–58. The findings indicate that the nursing workforce in the selected private hospital is predominantly young (Adsul & Upendra, 2022).

Table 1 Age Distribution

Age	Frequency	Percentage (%)
20-25	225	72.80
26-30	35	11.30
31-58	49	15.90
Total	309	100

This predominance of younger nurses may reflect current recruitment trends in the hospital or broader workforce demographics in private healthcare institutions. The relatively small representation of nurses aged 31–58 could imply various factors, such as career progression out of direct patient care roles, attrition due to job-related stress, or movement into specialized nursing fields that are not captured within the scope of this study (Martin et al., 2023).

Table 2 reveals that the nursing workforce is overwhelmingly female, with 256 respondents (82.80%), compared to 53 male nurses (17.20%). This aligns with the common gender composition of the nursing profession, particularly in Asian contexts (Nazareno et al., 2021).

Table 2 Sex Distribution

Sex	Frequency	Percentage（%）
Male	53	17.20
Female	256	82.80
Total	309	100

The high representation of female nurses is consistent with historical and cultural patterns in nursing, where the profession continues to be female-dominated despite increasing male participation (Noone et al., 2020).

Table 3 presents the marital status of the respondents. A significant majority, 225 nurses (72.80%), were unmarried, while 84 nurses (27.20%) were married. This data complements the earlier age distribution, reinforcing that the nursing population in this hospital is largely composed of young, single professionals (Czaja et al., 2023).

Table 3 Marital Status Distribution

Marital status	Frequency	Percentage（%）
Married	84	27.20
Unmarried	225	72.80
Total	309	100

The dominance of unmarried nurses may suggest fewer external family responsibilities, which could influence their exposure to occupational stress or availability for shift work (Muir et al., 2024).

Table 4 highlights the respondents' length of professional experience. The largest group had less than 1 year of experience, comprising 142 nurses (46.00%). This was followed by 83 nurses (26.90%) with 1–3 years of experience. A smaller proportion had longer tenure: 25 nurses (8.10%) each for 4–6 years and 10+ years, and 34 nurses (11.00%) had 7–9 years of experience (Smiley et al., 2021).

Table 4 Years of hospital nursing experience Distribution

years of hospital nursing experience	Frequency	Percentage(%)
Less than 1 year	142	46.00
1-3 years	83	26.90
4-6 years	25	8.10
7 - 9 years	34	11.00
10 years and above	25	8.10
Total	309	100

The research data demonstrates that three fourths of nurses possess less than 4 years of hospital experience hence affecting their ability to cope with stress and develop professional coping methods. The age distribution supplies essential background information for studying both work-related stress and caring practices among nurses. The inexperienced nursing professionals require structured mentorship alongside development opportunities and immediate access to mental health support to build their professional resilience and coping abilities (Hassamal et al., 2021).

Occupational Stress Levels

- The data collection consists of measuring occupational stress dimensions among respondents in six main areas: work demands, coworker support, workplace violence, hazards, difficulty taking leave, and powerlessness.

The measurement tool used validated Likert-scale questions to assess these vital workplace environment aspects which impact nurses' professional practice. This study reveals the mean stress scores from every dimension which demonstrate the total stress impact on hospital staff members in their private work environment at Henan China hospitals (Dong et al., 2023). The aggregated effect of stressful situations makes nurses vulnerable to performance and well-being deterioration thus negatively affecting patient care quality. Table 5 displays the evaluation conducted by nurses about their occupation-related work stress. Results show that nurses experienced stress to a moderate or high extent. Nurses consistently reported and scored highly on work demands difficulty with leave and lack of power as significant stressors in their profession (Akpor et al., 2023).

Table 5 Assessment of the Respondents Towards Occupational Stress

Dimension	Statements	Mean	Interpretation	SD
2.1 Work Demands	2.1.I am worried about receiving complaints from patients or their relatives for not meeting their demands.	2.90	Agree	0.97
	2.2.I have to bear the negative sentiment of patients or their relatives.	2.93	Agree	0.99
	2.3.I do not have sufficient time to meet patients' and their relatives' demands.	2.94	Agree	0.95
	2.4.I am unsure of the extent of patients' conditions or treatments that I should reveal to them.	2.90	Agree	1.00
	2.5.Excessive duties in the workplace prevent me from attending to patients.	2.93	Agree	0.93
2.2 Support from Coworkers	2.6.I cannot instantaneously obtain patient-related information because of inadequate communication within the team.	2.88	Agree	0.95
	2.7.Lack of support from the team affects patients' trust in me.	2.92	Agree	0.94
2.3 Workplace Violence and Bullying	2.8.I experience verbal abuse such as insults and sarcastic comments.	2.94	Agree	0.98

	2.9.I experience psychological abuse such as threats, discrimination, bullying, and harassment.	2.91	Agree	0.94
	2.10.I experience physical abuse such as hitting, kicking, pushing, pinching, pulling, and dragging.	2.94	Agree	1.00
2.4 Occupational Hazards	2.11.My exposure to radiation or strong light such as X-ray, ultraviolet light, and lasers is high.	2.92	Agree	0.98
	2.12.I feel stressed considering that my patients might be have contagious diseases such as SARS or AIDS.	2.94	Agree	0.95
	2.13.Transporting patients or equipment takes a toll on my body.	2.91	Agree	0.96
2.5 Difficulty Taking Leave	2.14.It is very difficult in asking for leaves for household emergencies.	2.93	Agree	0.99
2.6 Powerlessness	2.15.Patients' conditions do not improve affects me emotionally.	2.93	Agree	0.95
	2.16.Encountering the death of a patient affects me emotionally.	2.91	Agree	0.96
	Overall Rating	2.92	Moderate	0.96

Caring Behavior

This section presents the nurses' self-assessment of their caring behavior across three key dimensions: physical, psychological, and knowing and respecting the patient. Each dimension was evaluated through multiple Likert scale statements, with verbal interpretations based on the calculated weighted means. The results offer insight into how nurses perceive their capacity to provide compassionate, competent, and holistic care amidst occupational stress.

Table 6 summarizes the overall findings for each dimension.

Table 6 Assessment of the Respondents Toward aspects affecting Caring Behavior

Dimensions	Statements	Weighted Mean	Verbal Interpretations	SD
3.1 Physical aspect	3.1.1 Unable to effectively assist a patient in daily living activities	2.90	Agree	0.98
	3.1.2 Unable to effectively instruct a patient about an aspect of self-care (washing, dressing, etc.)	2.88	Agree	1.03
	3.1.3 Unable to effectively measure the vital signs of a patient (e.g. pulse and blood pressure)	2.91	Agree	0.96
	3.1.4 Unable to effectively involve a patient with his or her care	2.94	Agree	1.00
	3.1.5 Unable to effectively give reassurance about a clinical procedure	2.91	Agree	0.98
	3.1.6 Unable to effectively observe the effects of a medication on a patient	2.90	Agree	0.99
	3.1.7 Unable to effectively to consult with the doctor about a patient	2.97	Agree	0.96
	Overall rating	2.92	Moderate	0.99
3.2 Psychological aspect	3.2.1 Unable to effectively accompany patient during a clinical procedure	2.95	Agree	0.97
	3.2.2 Unable to effectively listen to a patient	2.95	Agree	0.96

	3.2.3 Unable to feel cheerful with a patient	2.92	Agree	0.94
	3.2.4 Unable to feel sorry for a patient	2.89	Agree	0.98
	3.2.5 Unable to be honest with a patient	2.92	Agree	0.99
	Overall rating	2.92	Moderate	0.97
3.3 Know and respect the patient aspect	3.3.1 Failure to provide privacy for a patient	2.93	Agree	0.95
	3.3.2 Unable to effectively explore the patient's lifestyle	2.96	Agree	0.92
	3.3.3 Unable to effectively explain clinical procedures to a patient	2.96	Agree	0.96
	3.3.4 Unable to effectively create nursing record about a patient	2.94	Agree	1.01
	Overall rating	2.94	Moderate	0.96

The physical aspect includes actions like assisting patients in daily living, taking vital signs, and providing reassurance. The psychological aspect measures emotional support, presence, and honesty in interactions. Meanwhile, knowing and respecting the patient covers dimensions like exploring patient lifestyle, ensuring privacy, and documenting care accurately (Choperena et al., 2023).

These findings support the notion that occupational stress impairs not only clinical performance but also relational dimensions of care, which are essential to holistic nursing practice (Babapour et al., 2022).

Table 7 presents the correlation results between the respondents' occupational stress levels and their caring behavior. Using Pearson's r, the study measured the strength and direction of the relationship across all three caring behavior domains: physical, psychological, and knowing/respecting the patient.

Table 7 Correlation matrix on the significant relationship between the caring behavior and their assessed Occupational Stress

Aspect of Caring Behavior		Occupational Stress	Interpretation	Conclusion
Physical Aspect	**Pearson's r**	0.964***	Very Strong	Significant
	p-value	<.001		
Psychological Aspect	**Pearson's r**	0.956***	Very Strong	Significant
	p-value	<.001		
Know and Respect the patient	**Pearson's r**	0.964***	Very Strong	Significant
	p-value	<.001		

Note. * p < .05, ** p < .01, *** p < .001

The results indicate a very strong positive correlation between occupational stress and all three dimensions of caring behavior. Specifically:

- As stress increases, nurses tend to provide less physical care, such as assisting in daily tasks or monitoring vital signs.
- Stress also significantly reduces psychological caring, including emotional presence and empathy.
- The ability to know and respect the patient, such as understanding their background or communicating clearly, is also compromised under high stress.

These findings are consistent with previous literature that links nurse stress to declines in compassionate and effective caregiving. The correlation is not only statistically significant but practically meaningful, emphasizing the critical impact of occupational stress on nurse-patient relationships (Babapour et al., 2022).

This section builds the foundation for interpreting the effect of stress across demographic subgroups in the next analysis.

Table 8, 9, 10, and 11 examines the association between respondents' demographic characteristics and their level of caring behavior across physical, psychological, and interpersonal domains. Using chi-square tests, the study explored whether differences in age, sex, marital status, and years of hospital nursing experience were significantly related to caring behavior.

Table 8 Relationship between the Respondent's Caring Behavior and their Age

Age		Moderate	Low	Very Low	Total	p	Conclusion
Physical Aspect level	20-25	225	0	0	225	**<.001**	**Sig.**
	26-30	0	2	33	35		
	31-58	0	5	44	49		
	Total	225	7	77	309		
Psychological Aspect level	20-25	225	0	0	225	**<.001**	**Sig.**
	26-30	0	23	12	35		
	31-58	0	38	11	49		
	Total	225	61	23	309		
Know and Respect the patient level	20-25	225	0	0	225	**<.001**	**Sig.**
	26-30	0	29	6	35		
	31-58	0	39	10	49		
	Total	225	68	16	309		

The results show a significant relationship between age and caring behavior. Nurses aged 20-25 years had higher caring behavior scores and poorer caring behaviors, whereas older nurses (especially those aged 31-58 years) had lower caring behavior scores, reflecting stronger caring behaviors. This suggests that older nurses may demonstrate stronger patient-centered practices despite being in a chronically high-pressure work environment (Kong et al., 2024).

Table 9 Relationship between the Respondent's Caring Behavior and their Sex

Sex		**Moderate**	**Low**	**Very Low**	**Total**	**p**	**Conclusion**
Physical Aspect level	Male	36	0	17	53	0.226	Not Sig.
	Female	189	7	60	256		
	Total	225	7	77	309		

Psychological Aspect level	Male	36	9	8	53	0.064	Not Sig.
	Female	189	52	15	256		
	Total	225	61	23	309		
Know and Respect the patient level	Male	36	12	5	53	0.292	Not Sig.
	Female	189	56	11	256		
	Total	225	68	16	309		

Across all domains, no significant difference was found in caring behavior based on sex. Both male and female nurses demonstrated similar patterns in their caregiving performance (Pribadi & Herwan, 2019).

Table 10 Relationship between the Respondent's Caring Behavior and their Marital Status

Marital Status		**Moderate**	**Low**	**Very Low**	**Total**	**p**	**Conclusion**
Physical Aspect level	Married	0	7	77	84	**<.001**	**Sig.**
	Unmarried	225	0	0	225		
	Total	225	7	77	309		
Psychological Aspect level	Married	0	61	23	84	**<.001**	**Sig.**
	Unmarried	225	0	0	225		
	Total	225	61	23	309		
Know and Respect the patient level	Married	0	68	16	84	**<.001**	**Sig.**
	Unmarried	225	0	0	225		
	Total	225	68	16	309		

Marital status was strongly associated with nursing behavior. Unmarried nurses scored higher in all domains with poorer caring behaviors. This may be influenced by less external family responsibilities and thus less experience and ability to handle tasks related to nursing (Oluma and Abadiga, 2020).

Table 11 Relationship between the Respondent's Caring Behavior and their Years of Experience as a Nurse

years of hospital nursing experience		**Moderate**	**Low**	**Very Low**	**Total**	**p**	**Conclusion**
Physical Aspect level	Less than 1 year	142	0	0	142	<.001	Sig.
	1-3 years	83	0	0	83		
	4-6 years	0	2	23	25		
	7-9 years	0	4	30	34		

	10 years and above	0	1	24	25		
	Total	225	7	77	309		
Psychological Aspect level	Less than 1 year	142	0	0	142	<.001	Sig.
	1-3 years	83	0	0	83		
	4-6 years	0	18	7	25		
	7-9 years	0	22	12	34		
	10 years and above	0	21	4	25		
	Total	225	61	23	309		
Know and Respect the patient level	Less than 1 year	142	0	0	142	<.001	Sig.
	1-3 years	83	0	0	83		
	4-6 years	0	20	5	25		
	7-9 years	0	27	7	34		
	10 years and above	0	21	4	25		
	Total	225	68	16	309		

There was a significant relationship between all the caring behaviors and years of experience ($p < 0.001$). This indicates that there were significant differences in the performance of nurses with different years of work experience in these caring behaviors. Specifically, nurses with less than 1 and 1-3 years of work experience performed poorly in all three areas of caring behaviors, whereas the nurses' ability to perform in these areas of caring behaviors increased as their work experience increased. Since nurses with less than 1 year and 1-3 years of work experience performed poorly in caring behaviors, this emphasizes the importance of adequate training for new nurses.

4. DISCUSSION

Researchers investigated the stress-workplace relationship which influences nursing care delivery among private hospital staff in Henan China. All three aspects of caring behavior scores - physical and psychological as well as knowing and respecting the patient - demonstrated an extremely positive relationship with occupational stress levels among nurses. The evidence shows that increased stress levels in nurses directly result in a severe reduction of their ability to deliver comprehensive care with compassion (Dong et al., 2023).

The results match previous research conducted in this field. Xu et al. (2020) established that healthcare professionals under work-stress have their interpersonal skills and emotional capacity compromised as these skills form the foundation for person-centered medical care. According to Dong et al. (2023) the stressors of powerlessness and insufficient workplace support diminished nursing staff motivation and job satisfaction making these findings comparable to the current research about powerlessness and workplace violence as the major factors reducing caring actions.

Population distribution actively contributed to these results. Children under thirty years old without spouses and novice nursing practitioners demonstrated increased stress and decreased caring abilities which points toward an association between age and professional experience. The findings support those presented in Li et al. (2024) regarding stress adaptation patterns in novice nurses thereby highlighting the need for specific support systems for new professionals.

The research findings support the importance of using Jean Watson's Theory (Wang et al., 2021) of Human Caring since this theory focuses on emotional presence together with trust development while providing whole-person patient care. From this standpoint caring exists as an interactive practice which struggles to endure when stressed continuously. The ability of nurses to carry out Watson's "caritive factors" diminishes when they face excessive administrative work and unsafe environments as well as insufficient autonomy in clinical practice.

The research supports the continuous expansion of evidence that demonstrates the need for healthcare system reform. Stress at work demands immediate action both for healthcare staff well-being and to protect patient security together with treatment standards. The succeeding section establishes specific recommendations that stem from the collected data.

5. CONCLUSION

This study concludes that there is a very strong positive relationship between occupational stress and caring behavior among nurses in a private hospital in Henan Province, China. As occupational stress levels increased, caring behavior across physical, psychological, and interpersonal domains decreased. The most prominent stressors identified were difficulty taking leave, powerlessness, and workplace violence—all of which significantly reduced nurses' ability to provide holistic and compassionate care.

In addition, young, unmarried, and inexperienced nurses reported higher levels of stress and lower levels of caring behavior, indicating that these populations may require additional organizational support.Conversely, years of experience were positively associated with higher caring behavior, indicating that resilience may improve over time with exposure and maturity.

These findings affirm the critical impact of the work environment on nurses' ability to deliver high-quality care. Occupational stress is not just a personal burden; it is a system-wide issue that undermines patient outcomes and the professional identity of nurses. Therefore, institutional policies and interventions must be implemented to address these stressors and enhance the overall culture of care

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