Vietnam Journal of Community Medicine, Vol. 67, English version No. 1, 2026, 236-239

JOB STRESS AMONG NURSES AT DISTRICT 6 MEDICAL CENTER AND TAN PHU DISTRICT MEDICAL CENTER, HO CHI MINH CITY

Phan Thanh Tra Mi, Phan Thanh Xuan*

University of Medicine and Pharmacy at Ho Chi Minh City - 217 Hong Bang, Cho Lon Ward, Ho Chi Minh City, Vietnam

Received: 11/05/2026
Revised: 22/05/2026; Accepted: 26/05/2026

ABSTRACT

Objective: To compare job strain and related factors among nurses at District 6 Medical Center and Tan Phu District Medical Center, Ho Chi Minh City, in 2025.

Methods: An analytical cross-sectional study was conducted from December 2024 to December 2025 among 294 nurses working at the two medical centers. The Vietnamese version of the Job Content Questionnaire (JCQ-V) developed by Robert Karasek was used to assess job strain. Data were entered using Epidata 3.1 and analyzed with Stata 14.0.

Results: The overall prevalence of high job strain among nurses was 6.1%; specifically, it was 5.4% at Tan Phu District Medical Center, lower than the 6.8% reported at District 6 Medical Center. Nurses at Tan Phu District Medical Center had a higher prevalence of high physical demand compared to those at District 6 Medical Center (60.5% vs. 44.9%), but received lower social support (76.8% vs. 85.1%). Factors significantly associated with high job strain included weekly working hours, holding concurrent positions, and caring for children under five years old.

Conclusion: Nurses at District 6 Medical Center tended to experience higher job strain compared to nurses at Tan Phu District Medical Center.

Keywords: Job strain, nurses, JCQ-V, Karasek, Ho Chi Minh City.

1. INTRODUCTION

Job strain in the healthcare sector has become a major concern in many countries due to its direct impact on mental health, work performance, and quality of patient care[1]. Nurses are healthcare professionals who frequently interact with patients and are exposed to pressure from heavy workloads, long working hours, high professional demands, and continuous caregiving responsibilities[2].

According to the job demand–control model developed by Robert Karasek, job strain occurs when job demands are high while decision-making authority and job control are low3. Numerous studies have shown that prolonged job strain increases the risk of burnout, reduces quality of life, and negatively affects the quality of patient care.

Worldwide, several studies have investigated the relationship between job strain and work performance[4-7]. In Vietnam, studies on nurses' job strain have been conducted in several hospitals and healthcare facilities[8-10]. However, most studies have mainly focused on descriptive findings, with limited comparative research on job strain between healthcare institutions. This issue has become increasingly important in the context of rising demands for primary healthcare services after the COVID-19 pandemic, particularly at medical centers.

District 6 Medical Center and Tan Phu District Medical Center are two district-level healthcare facilities with differences in population characteristics and workload. Comparing job strain among nurses at these two institutions may help identify differences in working environments and related factors, thereby providing evidence for appropriate interventions to improve nurses' occupational health.

Research objectives:

1. To compare the prevalence of high job strain among nurses at District 6 Medical Center and Tan Phu District Medical Center, Ho Chi Minh City, in 2025.

2. To analyze factors associated with high job strain among nurses at the two medical centers.

2. SUBJECTS AND METHODS

2.1. Patients, time and location

This study was conducted on 55 female patients diagnosed with early-stage breast cancer who were treated at the Department of Breast Surgery, K Hospital, from June 2021 to September 2021. Eligible patients included those with stage T1–T2, N0 breast cancer according to the AJCC/UICC 2017 classification, histopathological confirmation of breast carcinoma, and those who underwent sentinel lymph node imaging and biopsy using Tc-99m with available postoperative histopathological results and complete medical records. Patients were excluded if they had recurrent breast cancer, had received chemotherapy or radiotherapy before surgery, had evidence of distant metastasis, were allergic to radiopharmaceutical agents, or refused to participate in the study.

2.2. Research methods

2.2.1. Study subjects

The study population consisted of nurses working at District 6 Medical Center and Tan Phu District Medical Center, Ho Chi Minh City.

- Inclusion criteria:

*Corresponding author
Email: ptxuanytcc@ump.edu.vn **Phone:** (+84) 913723673 **Https:**//doi.org/10.52163/yhc.v67iE1.5251

+ Agreed to participate in the study.

+ Had been working at the institution for at least 6 months.

- Exclusion criteria:

+ Nurses on maternity leave or long-term sick leave during the study period.

+ Incomplete questionnaire responses.

2.2.2. Study Time and Setting

- Study period: From December 2024 to December 2025.

- Study setting: District 6 Medical Center and Tan Phu District Medical Center, Ho Chi Minh City.

2.3. Research methods

A cross-sectional descriptive study was conducted.

2.4. Sample Size and Sampling Method

The sample size was calculated using the formula for estimating a proportion

$$n = Z^2_{1-\alpha/2} \frac{p(1-p)}{d^2}$$

With p = 0.0639 based on the study by Pham Minh Khue et al.2 and d = 0.03, the minimum required sample size, after adding 10% for potential non-response, was 252 nurses. In practice, data were collected from 294 nurses.

A total sampling method was applied to include all eligible nurses at the two medical centers.

2.5. Data collection instrument

The study used the JCQ-V (Job Content Questionnaire – Vietnamese version) developed by Robert Karasek and standardized in Vietnam8.

The questionnaire assessed the following components:

+ Psychological job demand.

+ Decision latitude.

+ Social support.

+ Physical demand.

2.6. Data Collection and Analysis

Data was collected using a self-administered questionnaire. Data entry was performed using Epidata 3.1 and analyzed with Stata 14.0.

The statistical methods included:

+ Descriptive statistics.

+ Chi-square test.

+ Calculation of odds ratios (OR) and 95% confidence intervals (95% CI).

2.7. Ethical Considerations

The study was approved by the Ethics Committee of University of Medicine and Pharmacy at Ho Chi Minh City. Participants were informed about the study objectives, and participation was entirely voluntary.

3. RESULTS

3.1. General Characteristics of the Study Participants

Comment Table 1: The prevalence of female nurses working at the two medical centers was similar. At Tan Phu District Medical Center, the prevalence of nurses with children under 5 years old was higher than that at District 6 (37.6% vs. 29%). The prevalence of nurses living in rented accommodation, holding concurrent positions, and working more than 48 hours per week at Tan Phu District Medical Center was also higher than that at District 6.

Table 1. General characteristics of nurses at the two medical centers

	Distric 6 medical centel (n=145) n (%)	Tan Phu District Medical Center (n=149) n (%)	p
Male	43 (29,3)	40 (27,2)	>0,05
Female	104 (70,7)	107 (72,8)	>0,05
Having a child under 5 years old	98 (66,7)	99 (67,3)	>0,05
Private house	69 (46,9)	29 (19,7)	<0,05
Rented house	71 (48,3)	100 (68)	<0,05
Holding multiple positions	61 (41,5)	49 (33,3)	<0,05
Working more than 48 hours per week	60 (40,8)	72 (49)	>0,05

3.2. Comparison of perceptions regarding job stress between the two medical centers

Table 2. Nurses' perceptions of job stress

		Distric 6 n (%)	Tan Phu n (%)	p
Physical workload	+ Low	81 (55,1)	58 (39,5)	>0,05
	+ High	66 (44,9)	89 (60,5)	
Decision authority	+ Low	17 (11,6)	11 (7,5)	>0,05
	+ High	130 (88,5)	136 (92,6)	
Social support	+ Low	22 (15)	34 (23,1)	>0,05
	+ High	125 (85,1)	113 (76,9)	

Comment: Nurses at District 6 Medical Center tended to have greater autonomy in decision-making and better social support compared with those at Tan Phu District Medical Center; however, the differences were not statistically significant (p > 0.05).

3.3. Comparison of job stress status between the two medical centers

Table 3. Comparison of job stress status among nurses

Job status	Distric 6 n (%)	Tan Phu n (%)	p
High-strain job	10 (6,8)	8 (5,4)	>0,05
Active job	7 (4,8)	3 (2)	>0,05
Passive job	56 (38,1)	81 (55,1)	<0,05
Low-strain job	74 (50,3)	55 (37,4)	<0,05

Comment: The prevalence of high job stress at District 6 Medical Center was higher than that at Tan Phu District Medical Center. Nurses at Tan Phu District Medical Center also had higher prevalences of active jobs and low-strain jobs.

3.4. Association between working hours and job stress by medical center

Table 4. Association between working hours and job stress by nurses at medical center

Work time/ Week	Distric 6 (n %)	OR (KTC 95%)	Tan Phu n (%)	OR (KTC 95%)
≤ 40 hours	0 (0)	-	0 (0)	-
41–48 hours	4 (8,7)	0,87 (0,26 - 2,91)	0 (0)	-
>48 hours	6 (10,0)	1	8 (11,1)	-

Comment: Nurses working more than 48 hours per week at both medical centers had a higher risk of experiencing high job stress compared with those working ≤40 hours per week.

3.5. Association between holding concurrent positions and job stress by medical center

Table 5. Association between holding concurrent positions and high job stress by medical center

Holding concurrent positions				
Distric 6 (n %)	OR (KTC 95%)	Tan Phu n (%)	OR (KTC 95%)	p
No				<0,05
3 (3,5)	1	2 (2,0)	1	
Yes				
7 (11,5)	3,29 (0,88 - 12,27)	6 (12,2)	6,00 (1,25 - 28,80)	

Comment: Nurses holding concurrent positions at both medical centers had approximately 3–6 times higher risk of experiencing high job stress compared with those without concurrent positions. However, nurses at Tan Phu District Medical Center had a higher risk, and the difference was statistically significant ($p < 0.05$).

3.6. Association between caring for children under five years old and job stress by medical center

Table 6. Association between caring for children under five years old and high job stress

Distric 6 n (%)	OR (KTC 95%)	Tan Phu n (%)	OR (KTC 95%)	p
No				<0,001
1 (1,0)	1	1 (2,1)	1	
Yes				
10 (10,2)	10,1 (1,95–147,72)	7 (7,1)	3,55 (1,76–43,16)	

Comment: Nurses caring for children under five years old had a significantly higher risk of high job stress at both medical centers, particularly at District 6 Medical Center.

4. DISCUSSION

This study was conducted on 294 nurses working at District 6 Medical Center and Tan Phu District Medical Center, Ho Chi Minh City, in 2025 to compare job stress and related factors. The findings showed that the overall prevalence of high job stress was 6.1%, with nurses at Tan Phu District Medical Center having a lower prevalence of high job stress than those at District 6 Medical Center (5.4% vs. 6.8%). Although the prevalence of high job stress was not excessively high, it remains an important issue because nurses are frontline healthcare workers who directly care for patients and are frequently exposed to prolonged occupational stress.

The study findings were consistent with the study by Pham Minh Khue and colleagues in Hai Phong in 2011, which reported low to moderate levels of occupational stress among healthcare workers[2]. However, the prevalence observed in this study was considerably lower than that reported by Le Thanh Tai et al. (2008), who found that 42.8% of nurses experienced work-related stress[9]. The difference between the two medical centers may reflect variations in workload and population pressure in each area. Tan Phu District has a large population and rapidly increasing healthcare demands; therefore, nurses may have to handle heavier workloads, work longer hours, and experience greater physical demands.

The study also found that nurses at Tan Phu District Medical Center had a higher prevalence of physical job demands than those at District 6 Medical Center (60.5% vs. 44.9%), although they received less social support. This may be related to the nature of continuous patient care, the performance of multiple nursing procedures, and high work intensity. According to the Karasek Job Demand-Control Model[3], when job demands increase while job control remains limited, occupational stress and burnout risk are more likely to increase.

One notable finding was that nurses working more than 48 hours per week had approximately 3–6 times higher odds of experiencing high job stress compared with those working fewer than 40 hours per week. This result is consistent with the study by Stimpfel and colleagues[7], which demonstrated that prolonged working hours are associated with occupational burnout, reduced job satisfaction, and poorer quality of patient care. The current shortage of healthcare personnel and heavy workload at the primary healthcare level may explain why nurses frequently work overtime.

The study also showed that nurses holding concurrent positions had a significantly higher risk of high job stress than those without additional responsibilities. These nurses were not only responsible for professional duties but also participated in management tasks, administrative reporting, or community health programs. Simultaneously performing multiple roles may increase workload and psychological pressure during work.

In addition, nurses caring for children under five years old had a substantially higher risk of high job stress compared with those without young children. This finding is similar to the study by Do Nguyen Nhut Tran et al. (2008), which indicated that family and workplace pressures are important contributors to occupational stress among healthcare workers[10]. This reflects the dual burden of professional responsibilities and family obligations, especially among female nurses, who represented the majority of participants in this study. Family-related responsibilities may affect rest time, physical recovery, and psychological well-being.

The study further found that nurses at District 6 Medical

Center reported greater social support, reflected in better relationships with supervisors and a more favorable working environment. Previous studies have shown that social support in the workplace plays an important role in reducing occupational stress, improving work motivation, and enhancing the mental health of healthcare workers.

However, this study has several limitations. The cross-sectional design does not allow causal relationships between associated factors and job stress to be determined. In addition, data were collected using self-administered questionnaires, which may have resulted in recall bias or information bias. Furthermore, the study was conducted at only two medical centers, limiting the generalizability of the findings to the broader primary healthcare system.

5. CONCLUSION

The prevalence of high job stress among nurses at District 6 Medical Center and Tan Phu District Medical Center in 2025 was 6.1%, with nurses at District 6 Medical Center showing a higher prevalence of high job stress than those at Tan Phu District Medical Center. Factors significantly associated with high job stress included prolonged working hours, holding concurrent positions, caring for children under five years old, and an unfavorable working environment.

REFERENCES

[1] World Health Organization (2022), Mental health and well-being of health and care workers, WHO Press, Geneva.

[2] Phạm Minh Khuê và cs (2011), "Sự căng thẳng nghề nghiệp ở nhân viên y tế của một bệnh viện đa khoa tuyến tỉnh tại Hải Phòng năm 2011", Tạp chí Y học Dự phòng, tập XXIV(3).

[3] Karasek R.A. (1979), "Job demands, job decision latitude, and mental strain: Implications for job redesign", Administrative Science Quarterly, 24, tr. 285–308.

[4] Jian L., Sanderson K., Cocker F. et al. (2004), "Psychometric evaluation of the Chinese version of the Job Content Questionnaire", Industrial Health, 42(2), tr. 260–267.

[5] Hadi A.A., Naing N.N., Daud A. et al. (2006), "Reliability and construct validity of the Malay version of the Job Content Questionnaire", Southeast Asian Journal of Tropical Medicine and Public Health, 37(6), tr. 1254–1259.

[6] Shanafelt T.D., Boone S., Tan L. et al. (2012), "Burnout and satisfaction with work-life balance among US physicians relative to the general US population", Archives of Internal Medicine, 172(18), tr. 1377–1385.

[7] Stimpfel A.W., Sloane D.M., Aiken L.H. (2012), "The longer the shifts for hospital nurses, the higher the levels of burnout and patient dissatisfaction", Health Affairs, 31(11), tr. 2501–2509.

[8] Hoang T.G., Corbière M., Negrini A. et al. (2013), "Validation of the Karasek-Job Content Questionnaire to measure job strain in Vietnam", Psychological Reports, 113(2), tr. 363–379.

[9] Lê Thành Tài và cs (2008), "Tình hình stress nghề nghiệp của nhân viên điều dưỡng tại một số bệnh viện", Y học Thành phố Hồ Chí Minh, 12(4), tr. 95–101.

[10] Đỗ Nguyễn Nhựt Trần và cs (2008), "Stress và các yếu tố liên quan ở nhân viên y tế tỉnh Đồng Nai năm 2008", Tạp chí Y học TP.HCM, 12(4), tr. 1–7.