

ORIGINAL ARTICLES

Related factors of nurses' working motivation at Hanoi Medical university hospital in 2024

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ABSTRACT

Objective: Analyze factors related to the work motivation of nurses at Hanoi Medical University Hospital in 2024

Method: A cross-sectional study was conducted from November 2023 to March 2024 on 355 nurses at Hanoi Medical University Hospital. The logistic regression analysis was used to find the factors related to work motivation of nurses.

Results: 67.0% of nurses working at Hanoi Medical University Hospital had good work motivation. Univariate analysis showed that there were 3 factors related to the nurses' work motivation, including gender ($p < 0.05$), age ($p < 0.05$), and income per month ($p < 0.01$). However, when analyzing multivariate regression after eliminating the interference, gender and income were 2 factors that had a statistically significant relationship with nurses' working motivation. Male nurses were twice motivated to work than female ($p < 0.05$; 95% CI: 1.015 - 3.948). The results on the relationship between income and work motivation showed that nurses with an income > 20 million VND were 2.1 times more motivated to work than those with an income ≤ 20 million VND.

Conclusion: Developing a clear and public emulation and reward criteria is needed. The hospital should also review and adjust the salary and bonus policies to be appropriate for the capabilities of the nurses currently working at the hospital. There should be some incentives for female nurses or those who are main earners with financial difficulties to have more interest in their work.

Keywords: work motivation, nurses, hospital.

INTRODUCTION

Work motivation is the desire and willingness of employees to promote efforts toward achieving the goals of the organization as well as of individuals. Improving the motivation of employees will improve the productivity, efficiency and labor performance of the organization.

Research around the world on the work motivation of medical staff and particularly nurses was quite

popular. A study on nurses' work motivation in Hawassa public and private hospitals (2023) showed that majority of nurses perceived motivations as motivator (64,1%) (1). Another study by Baljoon et al. (2019) investigated nurses' work motivation. The findings revealed high levels of motivation, with average scores of 4.64 ± 1.10 and 4.54 ± 0.94 , respectively. Notably, the study also identified factors like age, working time and income as significantly influencing nurses' motivation (2). In Vietnam, the results of some



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studies showed that besides the above factors, professional qualifications, position or being the main income earner in the family were also significantly related to nurses' work motivation (3 – 4). If nurses were not motivated to work, they would easily become bored and ineffective, which might cause mistakes in patient care and treatment (4). Therefore, understanding factors related to work motivation aims to increase the proportion of good work motivation. This was proven to be one of the measures to improve the quantity and quality of the medical force, especially in the current context of a general shortage of nurses (5 – 6).

Hanoi Medical University Hospital is a place that receives up to 3,000 patients per day for treatment, so the medical staff, especially nurses, are under pressure in terms of time and workload as well as continuous training to ensure expertise and qualifications. In addition, medical staff are also under pressure for customer satisfaction to ensure quality and medical services according to the hospital's criteria. Therefore, hospital management departments need to learn to maintain stable human resources and thereby also contribute to improving the quality of health care services for patients. In recent years, the hospital has received investment and care about human resources to improve service quality, but there are still many difficulties. Therefore, we conducted this research to carry out factors related to nurses' work motivation at Hanoi Medical University Hospital. Our aims were to have more evidence to propose solutions that motivate nurses and contribute to the overall development of the hospital with the object: "Analysis factors related to work motivation of nurses at Hanoi Medical University Hospital in 2024".

METHODS

Research design: A cross-sectional study.

Study Subjects: Nurses are working at Hanoi Medical University Hospital.

Selection criteria: Nurses had working time of over 6 months and voluntarily participated in the study.

Exclusion criteria: Nurses was absent during the data collection period.

Study site and time: From November 2023 to March 2024 in Hanoi Medical University Hospital.

Sample size and sampling method

Using total sampling method. Out of a total of 644 nurses, 309 participants were excluded (279 participants refused to answer and 30 participants worked less than 6 months). Finally, 355 nurses were selected.

Research variables

Independent variables: Gender, age, marital status, main income earner, monthly income, working duration, work department and work position.

Dependent variable: Work motivation

Techniques, tools and procedures for data collection

Using a 7-factor toolkit with 23 subsections: general motivation (03 subsections), health (02 subsections), job and colleague satisfaction (03 subsections), personal ability satisfaction and job value (03 subsections), organizational commitment (05 subsections), dedication (04 subsections), time compliance and participation (03 subsections). This was used to survey nurses' work motivation based on some previous studies in the world and Vietnam (6 – 9). Responses were evaluated on a Likert scale with scores from 1 and 5. With the 5-level Likert scale, level 3 is "Normal", so in the study, the cutoff point of 3.5 will be chosen. Thus, an average score ≥ 3.5 is considered "good working motivation". By contrast, an average score < 3.5 is considered "poor work motivation"(10).

Data collection: The questionnaires were designed in the form of Kobotoolbox to collect the data. After being explained and receiving consent to participate in the study, the questionnaire was sent directly to the nurses in each department.

Data analysis: Analyze and process data using Stata 14.0 software. Descriptive statistics: frequency, percentage. Related analysis: calculate OR (Odds Ratio) and 95%CI using logistic regression analysis to find out the

relationship between work motivation (good work motivation: Average score ≥ 3.5 and poor work motivation: Average score <3.5) with characteristic factors of research subjects.

Ethics approval: The study was approved by the Scientific Council of Hanoi Medical University with Decision No. 221/QD-DHYHN dated January 26, 2024.

RESULTS

Table 1. Demographic characteristics of study participants (n=355)

	Characteristics	Frequencies (n)	Proportions (%)
Gender	Male	58	15.1
	Female	297	77.5
Age groups	< 30	127	35.8
	30-40	206	58.0
	>40	22	6.2
Marital status	Single	86	24.2
	Married	260	73.2
	Widowed, divorced	9	2.5
Main income earner	Yes	214	60.3
	No	141	39.7
Working time	≤ 5 years	142	40.0
	> 5 years	213	60.0
Department	Clinical	124	34.9
	Subclinical	197	55.5
	Manager/Administration	34	9.6
Position	Staff	335	94.4
	Manager	20	5.6
Average income/ month (VND)	≤ 20 million	241	67.9
	>20 million	114	32.1

Table 1 shows that female nurses make up the majority with 77.5%. The largest number of nurses were 30-40 years old (58.0%) and up to 214/355 participants (60.3%) were the main income earners in the family. Nurses with an income of less than 20 million accounted

for the higher proportion with 67.9%. 60.0% of participants have worked for more than 5 years. The clinical department got the highest rate with 55.5% and the lowest was the management/administrative department with 9.6%.

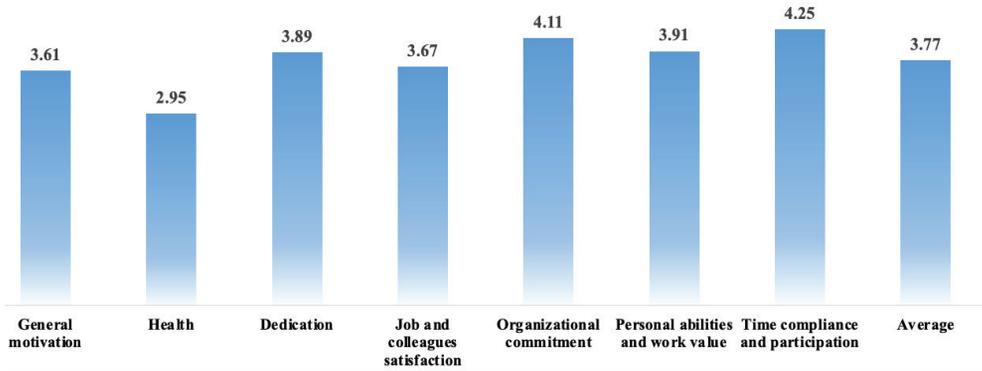


Figure 1. Average scores of work motivation factors

The chart showed that the score distribution of motivation factors fluctuated unevenly, the overall average score for 7 factors is 3.77.

The factor with the highest average score was Time compliance and participation (4.25) and the lowest was Health factor (2.95).

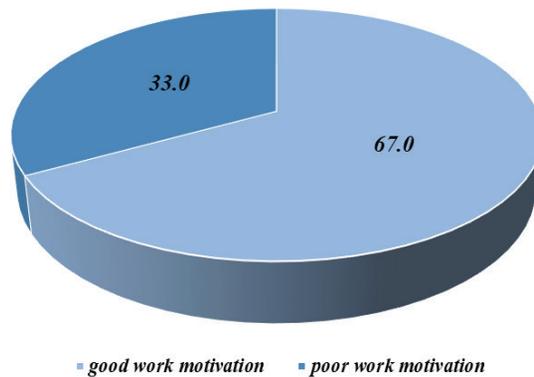


Figure 2. Proportion of work motivation

Figure 2 shows the rate of nurses with good work motivation was 67.0% (238/355) which

was 2.03 times higher than the rate of nurses with poor work motivation (33.0%).

Table 2. Univariate analysis of factors related to work motivation (n=355)

Factor	Work motivation		OR (95% CI)	
	Good work motivation	Poor work motivation		
Gender	Male	45 (77.6%)	13 (22.4%)	2.069* (1.041 - 4.110)
	Female	193 (65.0%)	104 (35.0%)	

Factor	Work motivation		OR (95% CI)	
	Good work motivation	Poor work motivation		
Age	<30 years	85 (66.9%)	42 (33.1%)	1
	30-40 years	133 (64.6%)	73 (35.4%)	0.900 (0.564 - 1.436)
	>40 years	20 (90.0%)	2 (10.0%)	4.941* (1.102 - 22.141)
Marital status	Single	55 (64.0%)	31 (36.0%)	1
	Married	176 (67.7%)	84 (32.3%)	1.079 (0.596 - 1.952)
	Widowed, divorced	7 (77.8%)	2 (22.2%)	1.582 (0.284 - 8.823)
Working time	≤ 5 years	95 (66.9%)	47 (33.1%)	1
	> 5 years	143 (67.1%)	70 (32.9%)	0.891 (0.484 - 1.641)
Main income earner	Yes	148 (69.1%)	66 (30.9%)	1.262 (0.775 - 2.054)
	No	90 (63.8%)	51 (36.2%)	1
Department	Clinical	133 (67.5%)	64 (32.5%)	1
	Subclinical	79 (63.7%)	45 (36.3%)	1.051 (0.632 - 1.748)
	Manager/ Administration	26 (76.5%)	8 (23.5%)	2.045 (0.841 - 4.971)
Position	Staff	222 (66.3%)	113 (33.7%)	1
	Manager	16 (80.0%)	4 (20.0%)	1.046 (0.305 - 3.592)
Average income/ month (VND)	≤ 20 million	150 (62.2%)	91 (37.8%)	1
	> 20 million	88 (77.2%)	26 (22.8%)	2.262** (1.274 - 4.015)

* $p < 0,05$; ** $p < 0,01$

The results of table 2 showed that three factors related to the work motivation of nurses. Female

nurses made up the majority of research subjects with nearly five times more than male nurses,

however, they had a lower rate of good work motivation than male. At the age of over 40, 90.5% of nurses were well motivated to work. In addition, nurses with income over 20 million

got a higher rate of good work motivation (77.2%). In contrast, research has not found the relationship between the remaining factors and nurses' work motivation.

Table 3. Multivariate analysis of factors related to work motivation (n=355)

	Factor	Work motivation		OR (95% CI)
		Good work motivation	Poor work motivation	
Gender	Male	45 (77.6%)	13 (22.4%)	2.002* (1.015 - 3.948)
	Female	193 (65.0%)	104 (35.0%)	1
Age	<30 years	85 (66.9%)	42 (33.1%)	1
	30-40 years	133 (64.6%)	73 (35.4%)	0.70 (0.427 - 1.161)
	>40 years	20 (90.0%)	2 (10.0%)	3.527 (0.769 - 16.175)
Main income earner	Yes	148 (69.1%)	66 (30.9%)	1.247 (0.775 - 2.007)
	No	90 (63.8%)	51 (36.2%)	1
Average income/month (VND)	≤ 20 million	150 (62.2%)	91 (37.8%)	1
	> 20 million	88 (77.2%)	26 (22.8%)	2.118* (1.243 - 3.608)

Prob > chi2 = 0.0010/Pseudo R2 = 0.0454

* $p < 0,05$

Multivariable logistic regression (table 3) was used after removing interference. The results of analyzing factors related to the work motivation of the research subjects showed that there were two variables (gender, average income/month) related to the nurses' motivation to work. Male nurses were twice motivated work than female ($p < 0.05$; 95% CI: 1.015 - 3.948). The results of the relationship between the income of participants and work motivation showed that nurses with income over 20 million (VND)

were 2.12 times more motivated than nurses with income under 20 million (VND) ($p < 0.01$; 95%CI: 1.243 - 3.608).

DISCUSSION

The majority of nurses participating in the research were female with a proportion of 77.5%. This result was quite similar to the research result at the Nghia Lo General Hospital in Yen Bai province (2020-2021), in

which the rate of females was 74.6% (4). The proportion of nurses aged 30-40 years old was as high as 58.0% and the proportion of nurses with over 5 years of work experience reached up to 60%. 73.2% of nurses were married, and 60.3% were the main income earners for their families, which reflected that the nursing profession was a very important and necessary part of creating income for healthcare workers to support their lives and families.

Figure 1 shows that the proportion of work motivation among nurses at the Hanoi University Hospital was at a medium level, with 67% having good work motivation (238/355). This result was quite similar to the study by Phung Thanh Hung in Ba Ria - Vung Tau with the proportion of nurses with good work motivation was 62.1% (11) but also lower than the study by Tran Thi Ly with a rate of 78.9% (4). Our study showed that the level of work motivation was not too low, however, it still needed to be improved to achieve a better quality of work.

The results of the univariate regression analysis on the relationship between the characteristics of the subjects and their work motivation showed that there were 3 related factors, which were gender, age group, and income. Nurses who were male, over 40 years old and had an income above 20 million VND would have a higher level of work motivation compared to the remaining groups. In the group over 40 years old, nurses had a diversity of experience, educational level, and professional knowledge that helped them successfully and accurately complete the tasks assigned. Therefore, they easily reduced the pressure in work. However, when conducting multivariate regression analysis after controlling the interference, 2 variables (gender and income) had a statistically significant relationship with nurses' work motivation. Male nurses were 2 times more motivated to work compared to the female group ($p < 0.05$; 95% CI: 1.015 - 3.948). This result was also

consistent with the study by author Quach Thu Hien when surveying 384 nurses at Tam Anh General Hospital in 2021, which showed that the gender factor was statistically significant (8). In some countries, especially in Southeast Asia, there was a traditional belief that men would be mainly responsible for generating income, while women were mainly responsible for family care. This could create differences in work motivation between gender groups. In addition, the study also noted the relationship between the "average income/month" factor and the work motivation of nurses at Hanoi Medical University Hospital ($p < 0.01$). The results on the relationship between the average monthly income of the study subjects and work motivation showed that nurses with a monthly income > 20 million VND have 2.12 times higher work motivation compared to nurses with an income ≤ 20 million VND. This was consistent with the results of Yasushi Kudo et al. when studying 516 nurses in Japan, where income was a factor influencing nurses' work motivation (12). For workers, salary is the main source of income in the remuneration system they receive, therefore, a fair level of compensation will be the main motivation to help improve their work efficiency.

The research results did not find a relationship between the factors of marital status, main income earner, length of service, position, and department with work motivation. However, our study showed that the factor of being the main income earner of the family had a relatively low p-value.

This study had some limitations due to its design and resource constraints. Firstly, the cross-sectional design captures a snapshot in time, making it difficult to determine causal relationship between factors like age, income and work motivation. Secondly, limited time and resources might have restricted the sample size, potentially affecting the generalizability of the findings to the wider population of nurses.

CONCLUSION

Univariate logistic regression analysis of the relationship between the subject's characteristics and work motivation showed that there were 3 related factors: gender, age group and income, respectively. Nurses who were male, aged >40 years old and had an income of over 20 million/month were higher motivated to work than the other groups. When analyzing multivariate regression, after eliminating interference, the two variables (gender and income) showed a statistically significant relationship with nurses' work motivation. Based on the results of the study, our team proposed several solutions to create a positive working environment and support for nurses working at Hanoi Medical University Hospital. The hospital should conduct a thorough survey and analysis of job positions and required competency levels in various departments to develop specific recruitment plans to meet staffing needs. Additionally, developing a clear and public emulation and reward criteria is needed. The hospital should also review and adjust the salary and bonus policies to be appropriate for the capabilities of the nurse currently working at the hospital. There should also be some incentives for female nurses or those who are main earners with financial difficulties to have more interest in their work.

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