WORK MOTIVATION AND ASSOCIATED FACTORS AMONG HEALTH WORKERS IN BAC GIANG PROVINCE IN 2024: A CROSS-SECTIONAL STUDY

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Work motivation is crucial for healthcare workers' performance and the overall effectiveness of the health systems. A well-motivated healthcare workforce can lead to improved patient satisfaction, reduced errors, and a more sustainable health system. This study aimed to describe the work motivation of healthcare workers in Bac Giang province in 2024 and analyze associated factors. A cross-sectional descriptive study was conducted among 253 health workers in Bac Giang province, Viet Yen and Yen Dzung districts using a quantitative approach with structured questionnaire. The main findings revealed that 80.6% of respondents were categorized as having low work motivation, with an average score of 3.66 (SD = 0.37). Significant associations were observed between work motivation and workplace location, years of working in the health field, and night shift frequency. Particularly, workers at the commune level exhibited the highest motivation (55.1%), compared to the district (24.5%) and provincial levels (20.4%). Similarly, workers with more than 10 years of working in the health field were more likely to have high motivation (91.8%) than those with 10 years or less (8.2%). Night shift frequency also highly associated to motivation, with workers taking more than eight shifts per month showing significantly higher odds of motivation (OR = 4.76, 95% CI: 1.22 - 18.65, p = 0.025). These findings highlight the importance of targeted strategies to improve motivation, such as providing tailored incentives, addressing workplace disparities, and offering support to less experienced workers.

Keywords: Work motivation, healthcare workers, working experience, Bac Giang.

I. INTRODUCTION

Work motivation plays an important role in organization behavior, and it is a contributable factor to the productivity, efficiency and success of those organizations.[1] Within the health system, the workforce is one of the five building blocks of the health system.[2] The role and importance of health care systems in modern society's quality of life and social welfare are widely recognized. In order to maintain and improve the quality of the health care system, attention should be paid to the management and development of health workforce. In addition, the global shortage of healthcare workers leads to a decline in the quality of care.[3]

Moreover, maintaining high levels of motivation among health workers during a prolonged pandemic is crucial. These frontline workers are facing immense challenges, including high workloads, exposure to risk, and emotional strain. In recent years, various infectious diseases, including Ebola virus disease (EVD), Dengue fever, or influenza

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are increasing in frequency, scale and impact, causing significant damages worldwide.[4] The impact of infectious disease outbreaks, consequently, on health worker motivation is complex, with both negative (burnout, fear, lack of support) and positive (sense of purpose, career growth, recognition) influences. In particular, a study conducted by Tran B (2023) shed the light that 49.7% of health workers were reported to have mild depression symptoms; 34.0% underwent moderate anxiety symptoms and 49.3% reported high-stress levels during the Covid-19 pandemic.[5]Perceived Stress Scale-4 (PSS-4 Another research conducted in Ho Chi Minh City (2023) showed that 7.0% of hospital social workers experienced normal and mild anxiety levels, 19.5% reported a moderate level of anxiety, and 13.5% had a severe level of anxiety.[6] Moreover, 71.1% of health workers had higher workload than usual; 60.6% of them felt that work morale was affected and 64.4% of health workers felt stressed at the thought or reminder of COVID-19.[7] As a result, in Ho Chi Minh City in 2021, nearly 1,000 health workers resigned.[8]

Many researches revealed low work motivation among health workers. Firstly, Chu Thi Huyen Xiem found this fact among health workers at Phong Tho District Health Center, Lai Chau Province, in 2021, with 31.4% categorized as having low motivation.[9] Factors such as increased workload, mental health strain, and insufficient recognition during and after the pandemic could contribute to this decline.[5,6] In a study by Doan Phuong Linh (2023), only 37.2% of respondents expressed commitment to their current job, while approximately 40% reported a decrease in job satisfaction.[10] Similarly, Nguyen Duc Thanh (2023) found a significant decline in job motivation among health staff across all dimensions post-pandemic, with a mean score of 3.26. Job satisfaction and organizational commitment were the most affected areas, with scores of 3.02 and 3.00, respectively.[11]

Bac Giang province was chosen because it is located in the north-east area with 60km far from center Hanoi, which makes it convenient for travelling from Hanoi. Moreover, during the time of COVID-19 pandemic, Bac Giang is one of the country's biggest COVID-19 hotspot, with a large number of infected patients, especially in Viet Yen and Yen Dzung disticts. Moreover, these two districts are two representative geographical ones for the urban area and the mountainous area in Bac Giang, with the national and international factories and crowded residents and migrants. Bac Giang surely requests the timely and accurate preparedness and public health response whenever infectious disease outbreaks occurs. And this region is in need of sufficient health workers with high work motivation.

Therefore, retaining health workers is crucial to ensuring the resilience of the healthcare system, particularly in the face of new infectious disease threats like emerging virus strains. As a result, understanding the existing work motivation of health workers and identifying factors that influence is crucial at any health organization. This study was conducted with an aim at describing the existing work motivation of health workers and analyzing various factors associated with the work motivation of health workers in Bac Giang province in 2024.

II. MATERIALS AND METHODS

1. Subjects

253 health workers at Bac Giang province (Provincial Center for Disease Control and Prevention) and Viet Yen and Yen Dzung districts.

Inclusion criteria

All health workers who have been working at Bac Giang provincial level, Viet Yen and Yen Dzung districts for more than 6 months by May 2024 when the data was collected.

Exclusion criteria

Those who refuse to participate in the study, on maternity leave, attend training courses for more than 1 month or are not present at the time of data collection.

2. Methods

Research design: A cross-sectional descriptive study, using quantitative methodology with structured questionnaire.

Study site: Bac Giang province (Provincial Center for Disease Control and Prevention) and Viet Yen and Yen Dzung districts.

Sample size and sampling: Convenient sampling technique was applied. The study selected all health workers at the Provincial Center for Disease Control and Prevention and Viet Yen and Yen Dzung districts. By the time of delivering the questionnaire, 253 people agreed to join the research. Therefore, the sample number was 253 participants, accounting for 91%.

Variables and measurements: To study the work motivation of health workers in Bac Giang, the variables of work motivation were built based on Nguyen Thi Hoai Thu's instruments, which were tested with 22 subsections (Appendix 3).[12] This consists of 6 components being applied to describe the motivation of health workers. 6 components include: General work motivation (03 sub-categories), Fatigue (02 sub-categories), General job satisfaction (07 sub-categories), Workplace relationship (03 sub-sections), Work consciousness (04 subsections) and Perspectives on working time (03 subsections).

In this research, we used the Likert scale to measure the work motivation variables of health workers. It is the most commonly used scale in studies by Rennis Likert (1932).[13] Likert gave a typical five-level popularity scale, which is:

Strongly disagree: 1 point / Disagree: 2 points / Normal: 3 points / Agree: 4 points / Strongly agree: 5 points.

For each sub-category, it is considered "unmotivated" when the average score was <4 points and "motivated" when the average score was ≥ 4 points.[11] The score for each factor was calculated as the sum of the scores of the sub-categories contained in that factor. Suppose an element has n sub-items, so the minimum score of that element is 1n, the maximum score is 5n. Choose a cut-off point of 4 if the total score < 4n is considered "unmotivated" to work with that element, and if the score is ≥ 4n, it is considered "motivated" to work with that element.

The variable "work motivation" is the dependent variable, which is determined as follows: With the assumption that each sub-item in the entire questionnaire has a role in motivating employees to work. With 6 faucets, a total of 22 sub-categories, there is a minimum of 22 points and a maximum of 110 points. Considered "Being motivated" when the total score is ≥ 88 points and "Being less motivated" when the total score is < 88 points.

Data collection and analysis

The data was entered using EPI DATA 3.1 and analyzed using SPSS version 20. Descriptive data analysis was applied

3. Research ethics

The research content was appropriate, with the attention and support of the authority of Bac Giang Center for Disease Control and Prevention and two districts where the research was conducted. Moreover, research subjects were clearly explained about the research purpose before answering the questionnaire

and only conducted with the verbal consent of the research subjects. Those who refused to participate or withdrew at any stage of the study were treated equally as other subjects. The collected information was only used for research purposes and was kept confidential.

III. RESULTS

1. General characteristics of study participants

Table 1 presents the sociodemographic and work-related characteristics of the participants (n = 253). The majority were female (70.4%), 40 years old or older (54.9%). Most participants held a bachelor's degree or equivalent (56.1%), and the majority had over 10 years of experience in the medical field (79.1%). Monthly income was predominantly below 10 million VN dong (78.3%).

Table 1. General characteristics of participants

Characteristic of participants		Frequency (n)	Percent (%)
Sociodemographic factors			
Gender	Male	75	29.6
	Female	178	70.4
Age group	Under 40	114	45.1
	≥ 40	139	54.9
Highest degree	College/Diploma	76	30.0
	Bachelor or equivalent	142	56.1
	Master/PhD	35	13.8
Work related factors			
Workplace	Commune	99	39.1
	District	95	37.5
	Province	59	23.3
Professional title	General practitioner	60	23.7
	Nurse	60	23.7
	Doctor of Preventive Medicine	17	6.7
	Public Health	25	9.9
	Other	91	36.0
Monthly income	< 10 million VN dong	198	78.3
	10 million VN dong and above	55	21.7
Years of experience working in medical field	Equal or less than 10 years	53	20.9
	More than 10 years	200	79.1

Characteristic of participants		Frequency (n)	Percent (%)
Work related factors			
Years of experience working in healthcare facility	Equal or less than 10 years	87	34.4
	More than 10 years	166	65.6
Attended training CME course within the past 12 months	No	115	45.5
	Yes	138	54.5
Working time	Office hour only	120	47.4
	Office hour and duty	133	52.6
Distance from home to work place	Equal or less than 3 km	138	54.5
	More than 3 km	115	45.5
Number of night shift per month	≤ 4 shifts per month	35	26.3
	5 - 8 shifts per month	77	57.9
	> 8 shifts per month	21	15.8
Thought about night shift schedule	Acceptable	109	82.0
	Overloaded	24	18.0
Time off after night shift	Yes	97	72.9
	No	36	27.1
Current position	Manager	66	26.4
	Clinical and para-clinical staff	99	39.6
	Administrative staff	85	34.0

2. Work motivation of health workers

Table 2. Work motivation of health workers (n = 253)

No.	Criteria	Work motivation		Mean	SD
		Unmotivated, n (%)	Motivated, n (%)		
1	General motivation	246 (97.2)	7 (2.8)	2.83	0.47
2	Job satisfaction	87 (34.4)	166 (65.6)	4.03	0.70
3	Burnout	106 (41.9)	147 (58.1)	3.68	1.13
4	Workplace relation	155 (61.3)	98 (38.7)	3.45	1.04
5	Conscientiousness	60 (23.7)	193 (76.3)	4.21	0.63
6	Timeless and Attendance	223 (88.1)	30 (11.9)	3.06	0.70
	Overall work motivation	**204 (80.6)**	**49 (19.4)**	**3.66**	**0.37**

Table 2 highlights varying levels of work motivation among healthcare workers, with general motivation notably low - 97.2% categorized as "unmotivated" (M = 2.83, SD = 0.47). Timeliness and attendance were also concerns (88.1% affected, M = 3.06, SD = 0.70), while burnout showed significant variability (58.1% affected, M = 3.68, SD = 1.13). Job satisfaction was relatively strong (65.6% satisfied, M = 4.03, SD = 0.70), but workplace relations posed challenges (61.3% dissatisfied, M = 3.45, SD = 1.04). Conscientiousness was the strongest area (76.3% highly responsible, M = 4.21, SD = 0.63). Overall, 80.6% had low work motivation (M = 3.66, SD = 0.37), emphasizing the need to address burnout, workplace relations, and general motivation while building on strengths like conscientiousness and job satisfaction.

3. Association between overall work motivation and sociodemographic and work-related factors

Table 3. Association between overall work motivation and sociodemographic and work-related factors

Variables		OR	p-value	95% CI
Sociodemographic factors				
Gender	Male	*ref.*		
	Female	1.209	0.595	0.6 - 2.44
Age group	Under 40	*ref.*		
	≥ 40	1.53	0.194	0.8 - 2.91
Work-related factors				
Workplace	Commune	*ref.*		
	District	*0.36*	*0.008**	*0.17 - 0.76*
	Province	0.54	0.138	0.24 - 1.21
Monthly income	< 10 million VN dong	*ref.*		
	10 million VN dong and above	1.393	0.367	0.68 - 2.86
Years of experience working in medical field	Equal or less than 10 years	*ref.*		
	More than 10 years	*3.55*	*0.02**	*1.21 - 10.39*
Number of night shift per month	≤ 4 shifts per month	*ref.*		
	5 - 8 shifts per month	2.196	0.188	0.68 - 7.09
	> 8 shifts per month	*4.76*	*0.025**	*1.22 - 18.65*

**Correlation is significant at the 0.05 level*

The logistic regression analysis highlights the association between overall work motivation and sociodemographic and work-related factors among a sample of 253 participants.

Firstly, in term of sociodemographic factors, gender was not significantly associated with

work motivation. Females had an odds ratio (OR) of 1.209 (95% CI: 0.6 - 2.44, p = 0.595) compared to males. Similarly, participants aged 40 and above showed slightly higher odds of work motivation (OR = 1.53, 95% CI: 0.8 - 2.91, p = 0.194) compared to those under 40, though this was not statistically significant.

Secondly, workplace location played a critical role in motivation. Participants working at the district level were significantly less likely to report motivation compared to those at the commune level (OR = 0.36, 95% CI: 0.17 - 0.76, p = 0.008). However, this trend was not statistically significant for those at the provincial level (OR = 0.54, 95% CI: 0.24 - 1.21, p = 0.138).

Years of experience in the medical field was significantly associated with work motivation. Participants with more than 10 years of experience had much higher odds of motivation (OR = 3.55, 95% CI: 1.21 - 10.39, p = 0.02) compared to those with 10 years or less.

Night shift frequency showed a significant association with motivation. Participants working more than eight-night shifts per month had markedly higher odds of being motivated (OR = 4.76, 95% CI: 1.22 - 18.65, p = 0.025) compared to those with four or fewer night shifts. However, those working 5 - 8 shifts did not show a statistically significant difference (OR = 2.196, 95% CI: 0.68 - 7.09, p = 0.188).

IV. DISCUSSION

In 2024, the work motivation of health workers in Bac Giang province was categorized as low for 80.6% of respondents, with an average score of 3.66 (SD = 0.37). This result aligns with Nguyen Duc Thanh's study in 2023, which reported a dramatic decline in job motivation across all dimensions among health workers post-COVID-19 pandemic, with a mean score of 3.26.[11] Similarly, Chu Thi Huyen Xiem found low work motivation among health workers at Phong Tho District Health Center, Lai Chau Province, in 2021, with 31.4% categorized as having low motivation.[9] These findings highlight the sustained impact of the COVID-19 pandemic on the morale and motivation of healthcare personnel. Factors such as increased workload, mental health strain, and insufficient recognition during and after the pandemic could contribute to this decline.[56] In a study by Doan Phuong Linh (2023), only 37.2% of respondents expressed commitment to their current job, while approximately 40% reported a decrease in job satisfaction.[10] Similarly, Nguyen Duc Thanh (2023) found a significant decline in job motivation among health staff across all dimensions post-pandemic, with a mean score of 3.26. Job satisfaction and organizational commitment were the most affected areas, with scores of 3.02 and 3.00, respectively.[11]

Interestingly, the contrasting findings from Vo Thi Kim Anh's study showed a higher work motivation level in 2023 in the Mekong Delta. And it suggests that contextual and organizational factors may influence motivation levels.[14] For instance, differences in institutional support, leadership practices, or economic incentives could account for the higher motivation levels observed in the Mekong Delta study.

Similarly, a study by Zemichael Weldegebriel found that 58.6% of healthcare professionals working in eight public hospitals in the West Amhara region reported having work motivation.[15] This suggests that while low motivation is prevalent in some areas, other regions may experience relatively higher levels of motivation, possibly due to differences in workplace conditions, support systems, and policy implementations.

These results highlight the need for targeted interventions to address work motivation issues in specific regions. Policymakers should

prioritize strategies such as providing adequate financial incentives, ensuring manageable workloads, and implementing mental health support programs. Further comparative research is also essential to identify and replicate successful practices from regions where motivation levels remain higher.

Our findings indicate that female participants aged 40 and above, as well as those with more than 10 years of experience, had significantly higher odds of motivation (OR = 3.55, 95% CI: 1.21 - 10.39, p = 0.02) compared to their counterparts with 10 years or less of experience. These results align with the study by Doan et all (2023), which similarly reported that individuals over the age of 40 exhibited greater work motivation.[10] Additionally, Doan's study found that employees with more than 10 years of experience demonstrated higher job satisfaction and motivation levels compared to those with less than five years of experience. This suggests that both age and professional experience play crucial roles in enhancing workplace motivation.

Our results indicate that participants with a monthly income of 10 million VN dong or more reported higher levels of motivation compared to those earning less. This finding is consistent with the study by Vo Thi Kim Anh (2023), which demonstrated that employees who were satisfied with their personal income exhibited significantly higher work motivation than those who were dissatisfied (OR = 3.11; p < 0.001).[14] These results highlight the important role of financial satisfaction in enhancing employee motivation, reinforcing the link between income level and workplace engagement.

Our findings reveal that workplace location plays a significant role in shaping employee motivation, as indicated by the significant association between workplace location and work motivation (p = 0.02). Notably, this association has not been widely reported in previous studies on work motivation among health workers. This suggests that environmental and institutional factors specific to different workplace locations may influence employees' level of motivation. Further research is needed to explore the underlying reasons for this relationship and to determine how workplace conditions and resources contribute to variations in motivation levels. It is interesting to find that employees at the commune level reported the highest levels of motivation (55.1%), followed by those at the district level (24.5%) and provincial level (20.4%). This trend suggests that employees in more localized, grassroots settings may experience greater engagement and commitment compared to their counterparts in more centralized or administrative roles. Several factors may contribute to this disparity. Employees at the commune level often have direct interactions with the communities they serve, providing them with a tangible sense of purpose and accomplishment that can boost motivation. Additionally, the smaller-scale nature of commune-level work might foster stronger interpersonal relationships, better team cohesion, and a clearer understanding of how their efforts contribute to organizational goals. Conversely, employees at the district and provincial levels may face challenges such as bureaucratic processes, less direct community impact, or a greater sense of detachment from the outcomes of their work. These factors could contribute to lower levels of motivation in these settings. These findings underscore the importance of tailoring motivation strategies to workplace context. For example, fostering a sense of purpose and community impact at higher administrative levels may help bridge

the motivation gap observed between different workplace location.

Another interesting finding from our analysis is that participants working more than eight-night shifts per month had significantly higher odds of being motivated (OR = 4.76, 95% CI: 1.22 - 18.65, p = 0.025) compared to those working four or fewer night shifts. Notably, this association has not been widely reported in previous studies on work motivation among health workers. This pattern suggests that a higher frequency of night shifts may instill a stronger sense of responsibility and dedication, potentially fostering greater engagement and motivation. Employees working more frequent night shifts might perceive their contributions as essential to workplace operations, reinforcing their sense of purpose and commitment. Furthermore, financial incentives or additional compensation commonly associated with night shifts could also play a role in enhancing motivation. This finding is consistent with Vo Thi Kim Anh's study (2023), which revealed that employees satisfied with their personal income had a significantly higher rate of strong work motivation compared to those who were unsatisfied (OR = 3.11; p < 0.001).[14] Moreover, this finding aligns with Nguyen Duc Thanh's study (2023), which identified low monthly income (less than $400) as a contributing factor to decreased work motivation.[11]

Limitation of study

This study has several limitations that should be acknowledged. First, as a cross-sectional study, it only captures a snapshot of work motivation at a single point in time, limiting the ability to establish causal relationships between factors and motivation levels. Longitudinal research is needed to assess changes over time.

Second, the study relied on self-reported data, which may introduce response bias, as participants might have provided socially desirable answers rather than reflecting their true motivation levels. Future studies could incorporate objective measures or qualitative methods to validate findings.

Third, the sample was limited to healthcare workers in Bac Giang province, specifically in Viet Yen and Yen Dzung districts. This may restrict the generalizability of the findings to other regions with different healthcare structures, socioeconomic conditions, and workplace environments.

Additionally, while this study identified significant associations between work motivation and factors such as workplace location, years of experience, and night shift frequency, other potential influences - such as organizational culture, leadership styles, and personal life circumstances - were not explored in depth. Future research should consider these additional variables to provide a more comprehensive understanding of work motivation among healthcare workers.

V. CONCLUSION

This study provides important insights into the work motivation of healthcare workers in Bac Giang province in 2024. The findings reveal a concerning level of low motivation among health workers (19.4% of participant reported to be motivated), with significant associations between motivation and workplace location, years of medical experience, and night shift frequency. Experienced commune-level health workers showed higher motivation, highlighting the value of community engagement. Likewise, those with frequent night shifts exhibited strong motivation, underscoring the impact of workload recognition and incentives.

To address the identified gaps, it is crucial to implement targeted interventions such as

mentorship programs for less experienced workers, equitable workload distribution, and tailored incentives to support staff at district and provincial levels. Policymakers should also consider enhancing workplace relationships and reducing burnout, as these factors were found to influence motivation. Future studies should explore longitudinal trends and assess the impact of specific interventions to sustain and improve motivation among healthcare workers in similar settings.

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Conflict of interest

The authors declare no conflict of interest related to this study. No financial, professional, or personal relationships have influenced the research design, data collection, analysis, or interpretation of the findings. All procedures were conducted with academic integrity and adherence to ethical research standards.

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