

JOB SATISFACTION OF HEALTHCARE WORKERS AT HEALTHCARE CENTRES IN VIETNAM DURING 2015-2024: A SYSTEMATIC REVIEW

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ABSTRACT

Received:	14/3/2025	In the context of Vietnamese health centers facing significant challenges related to human resources and service quality, job satisfaction among healthcare workers has become a topic of considerable interest to both administrators and researchers. This study aimed to synthesize evidence on job satisfaction among healthcare workers at Vietnamese health centers from 2015 to 2024. The systematic review was conducted using PubMed and Google Scholar, following PRISMA guidelines. Study quality was assessed using the STROBE checklist to ensure objectivity and reliability of the findings. Six studies meeting the eligibility criteria were included, with sample sizes ranging from 151 to 343 healthcare workers. Evaluated factors included working environment, relationships with managers and colleagues, remuneration (salary and benefits), learning opportunities, and overall job satisfaction. The results indicated that the highest satisfaction levels were most frequently associated with relationships with colleagues and managers, while remuneration and working conditions received the lowest satisfaction ratings. These findings underscore the importance of improving working conditions and remuneration to enhance job satisfaction and organizational performance among healthcare personnel at Vietnamese health centers in the future.
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KEYWORDS

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Healthcare workers

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SỰ HÀI LÒNG CỦA CÁN BỘ NHÂN VIÊN Y TẾ VỚI CÔNG VIỆC TẠI CÁC TRUNG TÂM Y TẾ Ở VIỆT NAM TRONG GIAI ĐOẠN 2015-2024: TỔNG QUAN HỆ THỐNG

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THÔNG TIN BÀI BÁO

TÓM TẮT

Ngày nhận bài:	14/3/2025	Trong bối cảnh các trung tâm y tế tại Việt Nam đối mặt với nhiều thách thức về nguồn nhân lực và chất lượng dịch vụ, mức độ hài lòng trong công việc của nhân viên y tế trở thành một chủ đề nhận được nhiều sự quan tâm từ các nhà quản lý và nghiên cứu. Nghiên cứu này được thực hiện nhằm tổng hợp các bằng chứng về mức độ hài lòng trong công việc của nhân viên y tế tại các trung tâm y tế ở Việt Nam trong giai đoạn 2015–2024. Quá trình tổng quan hệ thống được thực hiện trên hai cơ sở dữ liệu PubMed và Google Scholar tuân theo hướng dẫn PRISMA. Chất lượng nghiên cứu được đánh giá bằng bảng kiểm STROBE nhằm đảm bảo tính khách quan và độ tin cậy của kết quả phân tích. Sáu nghiên cứu đáp ứng tiêu chí lựa chọn được đưa vào phân tích, với quy mô mẫu từ 151 đến 343 nhân viên y tế. Các yếu tố được đánh giá bao gồm môi trường làm việc, mối quan hệ với lãnh đạo và đồng nghiệp, lương/ phúc lợi, cơ hội học tập và sự hài lòng tổng thể. Kết quả cho thấy mức độ hài lòng cao nhất thường liên quan đến mối quan hệ đồng nghiệp và lãnh đạo, trong khi lương và điều kiện làm việc có mức độ hài lòng thấp nhất. Những phát hiện này nhấn mạnh tầm quan trọng của việc cải thiện các yếu tố liên quan đến điều kiện làm việc và để ngô để nâng cao sự hài lòng và hiệu quả công việc của cán bộ nhân viên y tế tại các trung tâm y tế ở Việt Nam trong tương lai.
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TỪ KHÓA

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1. Introduction

Job satisfaction among healthcare workers (HCWs) is a key determinant of healthcare quality, labour productivity, and the long-term sustainability of the health system [1]-[4]. When HCWs are satisfied, they tend to maintain work motivation, engage more effectively with patients, and exhibit lower turnover rates [5]. Conversely, prolonged dissatisfaction can erode service quality, precipitate occupational burnout, and weaken overall system capacity - effects that are especially pronounced at the primary-care level, where staff routinely face intense workloads and limited resources [3], [6].

International evidence confirms a close link between job satisfaction among healthcare workers and overall health system performance. In India, Yadav et al. [4] showed that recognition from supervisors, opportunities for professional development, and a supportive work environment exert a direct positive influence on both job satisfaction and service quality. Platis et al. [5] and Deriba et al. [6] further demonstrated that remuneration, fringe benefits, and promotion prospects are powerful predictors of motivation and occupational commitment. Findings from Ethiopia and several South-East Asian settings likewise highlight the importance of safe working conditions and transparent, equitable appraisal mechanisms for retaining a resilient frontline workforce [7]. In a parallel study from India, Singh et al. [7] reported that HCWs were satisfied with their colleagues, leadership, and workplace communication but dissatisfied with physical working conditions-reflecting inadequate infrastructure and welfare provision. Collectively, these studies indicated that job satisfaction is a universal concern; however, any intervention must be tailored to the specific policy, cultural, and organisational context of each health system [8].

Between 2015 and 2024, Vietnam's healthcare system underwent substantial organisational, financial and workforce reforms - processes that accelerated in the wake of the COVID-19 pandemic. District Health Centres (DHCs) and Commune Health Stations (CHSs) - the frontline facilities responsible for implementing national health programmes-routinely operate under high pressure yet have limited access to professional-development opportunities or infrastructure investment. Although numerous studies on job satisfaction among HCWs have been conducted, most have focused on provincial or central hospitals and large urban facilities [9]-[11]. In contrast, primary-care centres - especially those in rural districts - remain under-researched. Existing Vietnamese evidence is also largely fragmented and descriptive, lacking a systematic synthesis that would provide a comprehensive picture of HCWs' satisfaction at local healthcare centres. This knowledge gap is crucial, especially considering the country's urgent need for empirical data to guide resource allocation, improve working conditions, and retain a high-quality workforce at the grassroots level [12], [13].

To address this need, the present study systematically aggregates quantitative evidence on HCW job satisfaction at Vietnamese healthcare centres from 2015 to 2024. To our knowledge, it is the first systematic review devoted to this topic for the specified period. By rigorously collating and analysing existing research, we aim to fill an important knowledge void and generate a robust empirical foundation for policymakers and health-sector leaders. The findings are expected to guide priority setting, refine remuneration schemes, enhance work environments and design context-appropriate human-resource policies for primary-care facilities-settings that bear heavy service burdens yet have received scant research attention to date.

2. Materials and methods

Study population: All reports, theses, dissertations, and articles published in English or Vietnamese between 2015 and 2024 (hereinafter referred to as studies).

Inclusion criteria:

- Study design: No limitations on the study design.
- Research findings: All studies reporting on the job satisfaction of healthcare workers at healthcare centres in Vietnam.

Exclusion criteria:

- Studies with insufficient data or unavailable full-text articles.
- Qualitative research
- Non-original research.
- Studies conducted in hospitals or clinics, not healthcare centres.
- Duplicate studies or studies published before 2015.

Research methods***Databases and search strategy***

The research team identified a list of relevant keywords for the study topic and tailored search strategies for each database. Two researchers used these keywords to search for literature in major databases. The primary databases used for the search include PubMed and Google Scholar.

Two separate Boolean search strings were constructed - one in English and one in Vietnamese - to ensure comprehensive retrieval of relevant literature. The English string was: ("job satisfaction" OR "work satisfaction") AND ("healthcare worker*" OR "health personnel" OR "medical staff") AND (Vietnam) AND ("healthcare centre*" OR "healthcare center*" OR "primary healthcare facility" OR "district health* centre*" OR "district health* center*" OR "commune health station" OR "center for disease control" OR "centre for disease control" OR "CDC"), where the asterisk (*) captures both singular and plural forms. The corresponding Vietnamese string was: ("sự hài lòng công việc" OR "sự hài lòng trong công việc") AND ("nhân viên y tế" OR "cán bộ y tế" OR "cán bộ nhân viên y tế") AND ("trung tâm y tế" OR "trạm y tế" OR "trung tâm kiểm soát bệnh tật") AND ("Việt Nam"). Three filters were subsequently applied to both queries: (i) language - Vietnamese or English; (ii) publication period - 2015 to 2024; and (iii) document type - peer-reviewed journal articles, theses, or other scholarly reports.

Search date: December 23, 2024.

Study design: This study is designed as a systematic review, following the steps outlined in PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) [14].

Study selection process: Two researchers will independently review the titles and abstracts of the studies. The results from each researcher will be cross-checked, discussed, and consensus reached, or a third member will be consulted to finalize the studies included in the analysis. Studies meeting the inclusion criteria and not falling under the exclusion criteria will be included in the systematic review. The full-text versions of the selected studies will be thoroughly reviewed to extract the necessary information.

Assessment of study quality: The quality of observational studies will be assessed using the STROBE checklist (Strengthening the Reporting of Observational Studies in Epidemiology). Studies with a STROBE checklist score of 50% or higher will be included in the final analysis [15], [16]. This threshold was chosen to balance methodological rigour with data inclusiveness, recognising that many Vietnamese observational studies are still limited in reporting quality yet nevertheless provide valuable insight into real-world practice.

Data extraction: Data fields relevant to the study will be extracted, including: (1) *General study information* (lead author, publication year); year of data collection, province/city of the study, study period, study design, sample size, sampling technique, data collection methods. (2) *Research outcomes:* Main questionnaires used to measure healthcare workers' job satisfaction, the level or rate of satisfaction among healthcare workers.

Data analysis: The systematic review results will be presented in a summary table of studies that meet the criteria. If data collection period information is unavailable, the publication year of the study will be used.

3. Results

The results depicted in Figure 1 indicate that a total of 115 records were retrieved from the two primary databases - PubMed (n = 62) and Google Scholar (n = 53). After eliminating 12

duplicates, 103 records remained for title-and-abstract screening, during which 86 were excluded for not meeting the eligibility criteria. The full texts of the remaining 17 articles were assessed; 11 were excluded because the full text was inaccessible ($n = 5$), the report was not an original study ($n = 1$), the study population was inappropriate ($n = 3$), or essential outcome data were missing ($n = 2$). Consequently, six studies satisfied all inclusion criteria and met the STROBE quality threshold, and were included in the final systematic analysis.

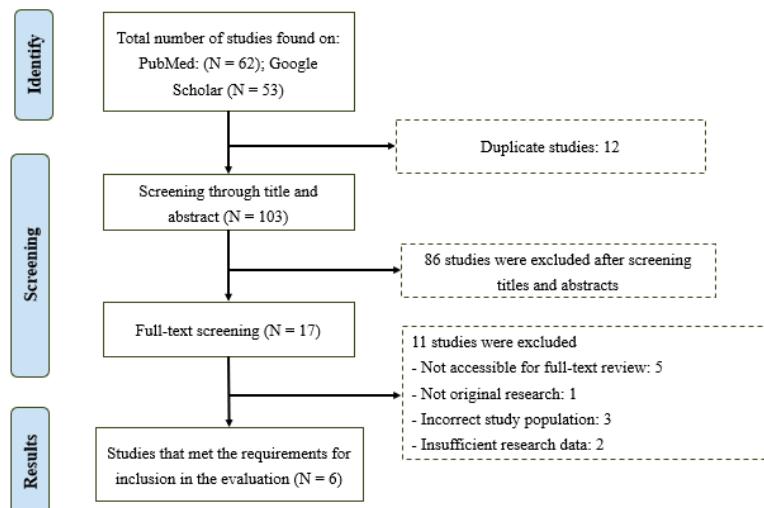


Figure 1. Flow diagram of the research process following the PRISMA guidelines

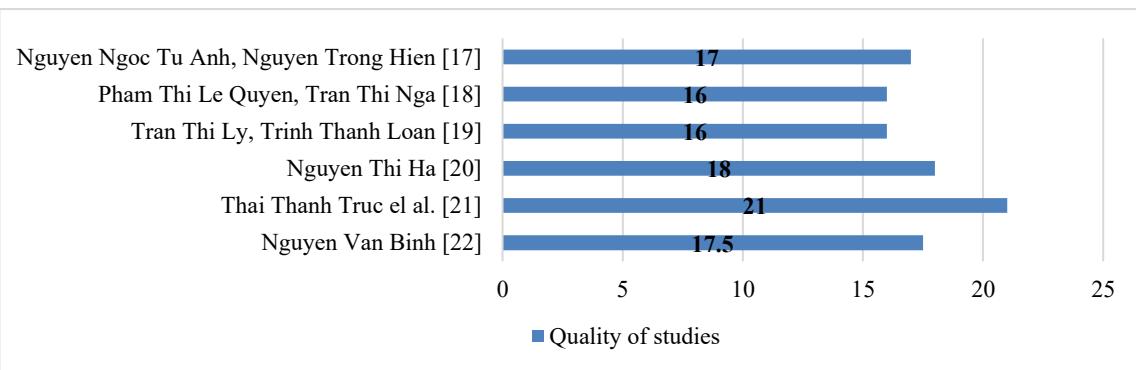


Figure 2. Study quality assessment based on the STROBE checklist

As shown in Figure 2, none of the included studies fulfilled all 22 STROBE items. Compliance ranged from 16 to 20 items, suggesting that the included studies fulfilled the essential requirements of observational reporting standards. These scores confirm that every study meets the minimum quality threshold required for inclusion in the synthesis and analysis phases of this systematic review.

Research characteristics

Synthesising evidence from the six studies conducted between 2015 and 2024 on job satisfaction among healthcare workers at Vietnamese healthcare centres shows sample sizes ranging from 151 to 343 participants. Field sites were located in Ho Chi Minh City (two studies), Quang Binh, Bac Ninh, Bac Giang and Can Tho. Regarding sampling, four studies used census (total-population) sampling, one employed convenience sampling, and two did not specify a sampling strategy. Most investigations relied on descriptive statistics to present their data. In addition, two studies assessed scale reliability with Cronbach's alpha, two performed exploratory factor analysis (EFA), one extended the analysis with confirmatory factor analysis (CFA) and structural equation modelling (SEM), while another applied multivariate regression

to identify determinants of satisfaction; one study also used χ^2 or Fisher's exact tests to examine associations between variables. Collectively, the evidence points to a clear preference for quantitative methods with varying analytical depth, although the bulk of analyses remain descriptive in nature (Table 1).

Table 1. Study characteristics

No.	References	Year	Study objective(s)	Study location	Sample size (HCWs)	Sampling method	Data-analysis methods
1.	[17]	2023	Analyse and evaluate the factors influencing job satisfaction and work commitment of staff at healthcare centres in Ho Chi Minh City.	Ho Chi Minh City	343	Not specified	Cronbach's alpha; EFA; CFA; SEM
2.	[18]	2022	Describe job satisfaction among HCWs at the Quang Binh Provincial Centre for Disease Control in 2022.	Quang Binh Province	151	Census	Descriptive statistics
3.	[19]	2021	Describe the human-resource status and job satisfaction of HCWs at the Bac Ninh Provincial Centre for Disease Control (2020).	Bac Ninh Province	166	Census	Descriptive statistics
4.	[20]	2019 - 2020	(1) Assess job satisfaction of HCWs at Hiep Hoa District Health Centre (Bac Giang) in 2019; (2) analyse related factors.	Bac Giang Province	215	Convenience sampling	Descriptive statistics; Cronbach's alpha
5.	[21]	2020	Explored job satisfaction and associated factors among community healthcare workers (HCWs) during the COVID-19 pandemic.	Ho Chi Minh City	319	Census	Descriptive statistics, χ^2 or Fisher's exact tests
6.	[22]	2016	(1) Analyse the current functioning of the preventive-medicine system in Can Tho; (2) examine factors affecting HCW job satisfaction at preventive health centres; (3) propose improvement measures.	Can Tho City	330	Not specified	Cronbach's Alpha, EFA, multivariate regression

Table 2. Measures of healthcare workers' job satisfaction

References	Study Year	Study Design	Study Location	Study size	Measure	Main Measure of Job Satisfaction
[17]	2023	Cross-sectional	Healthcare centres in Districts of Ho Chi Minh City	343 healthcare workers	6 factors, 19 sub-items	Job nature, Training & development, Relationships with colleagues and leaders, Salary, bonuses, and benefits
[18]	2022	Cross-sectional	Provincial Centre for Disease Control (CDC) Quang Binh	151 healthcare workers	5 factors, 44 sub-items	Work environment; Direct leadership and colleagues; Internal regulations, salary, and benefits; Work, learning, and promotion opportunities; Overall satisfaction
[19]	2021	Cross-sectional	Provincial Centre for Disease Control (CDC) Bac Ninh	166 healthcare workers (excluding centre management)	5 factors, 44 sub-items	Work environment; Direct leadership, Colleagues; Internal regulations, Salary, benefits; Work, learning & promotion opportunities; Overall satisfaction

References	Study Year	Study Design	Study Location	Study size	Measure	Main Measure of Job Satisfaction
[20]	2019- 2020	Cross- sectional	Hiep Hoa District Health Centre, Bac Giang	215 healthcare workers	7 factors, 40 sub-items	Salary & Relationship with leadership, Knowledge, skills & work effectiveness, Learning & development, Relationship with colleagues, Interaction with the agency
[21]	2020	Cross- sectional	Healthcare centres in Ho Chi Minh City	319 healthcare workers responsible for infectious disease prevention and control	Job Satisfaction Scale (JSS) - 9 factors, 36 sub-items	Pay, Promotion, Supervision, Fringe benefits, Contingent rewards, Operating conditions, Coworkers, Nature of work, Communication
[22]	2016	Cross- sectional	Preventive Healthcare centres in Can Tho City	330 healthcare workers	10 factors, 66 sub-items	Management environment, Work facilities, Job characteristics, Work effectiveness, Salary, Colleagues, Training & development, Job stability, Benefits, Autonomy in work

Studies on healthcare workers' job satisfaction at healthcare centres in Vietnam from 2015 to 2024 have employed various measures to assess job satisfaction based on different factors and sub-items. The application of these measures allows researchers to gauge the factors influencing job satisfaction among healthcare workers and to propose solutions for improving the work environment and enhancing job quality in the healthcare sector. These studies mainly used cross-sectional designs, enabling data collection at a single point in time to analyze the factors affecting healthcare workers' job satisfaction. The studies were conducted across various provinces and cities, including Ho Chi Minh City, Quang Binh, Bac Ninh, Bac Giang, and Can Tho, which highlights the diverse representation of these studies across different regions of the country.

As shown in Table 2, the study populations primarily consisted of healthcare workers currently employed at various healthcare centres nationwide, with sample sizes ranging from approximately 151 to 343 participants. Each study utilized a different measure of job satisfaction, including 5 to 10 factors, with the number of sub-items ranging from 19 to 66.

The measures used to assess job satisfaction in these studies show distinct differences. Some measures consist of fewer factors and sub-items, while others are more complex, including many factors and sub-items. For example, the measure by Nguyen Ngoc Tu Anh and Nguyen Trong Hien [12] assessed job satisfaction through 6 factors and 19 sub-items, including aspects such as job nature, training and development, relationships with colleagues and leaders, and policies related to salary, bonuses, and benefits. Meanwhile, the measure by Nguyen Thi Ha [20] used 7 factors and 40 sub-items, covering factors such as salary and benefits, facilities, relationships with leadership and colleagues, and work performance and development opportunities. This variation demonstrates the richness in approaches to measuring job satisfaction among healthcare workers.

Despite the differences in the number of factors and sub-items, all the measures emphasize key factors such as the working environment, leadership-colleague relationships, and job-related benefits, indicating that these are the primary factors affecting healthcare workers' job satisfaction. These measures play an essential role in understanding the factors influencing healthcare workers' satisfaction at healthcare centres. This is crucial because healthcare workers' job satisfaction not only impacts job performance but also directly influences the quality of healthcare services provided to patients. Factors such as the work environment, salary, benefits, and relationships with colleagues and leadership are all identified as significant contributors to enhancing job satisfaction

and motivating healthcare workers. Furthermore, the diversity in these measures indicates that no single measure is perfect for all healthcare settings. Each measure reflects factors that are more suited to the specific characteristics of the facility and the research region. Choosing the appropriate measure will help managers better understand the state of job satisfaction and implement strategies to improve both job performance and healthcare workers' satisfaction.

Healthcare workers' job satisfaction ratings

Table 3. Healthcare workers' job satisfaction ratings

References	Study Location	Study size	Satisfaction ratings with selected factors
[18]	Provincial Centre for Disease Control Quang Binh	151 healthcare workers	Work environment: 4.0 ± 0.6 (74.0%) Direct leadership: 4.3 ± 0.5 (88%) Colleagues: 4.3 ± 0.5 (88.2%) Internal regulations, salary, benefits: 3.9 ± 0.7 (66.6%) Overall satisfaction: 4.3 ± 0.6 (84.6%)
[19]	Provincial Centre for Disease Control (CDC) Bac Ninh	166 healthcare workers (excluding centre management)	Work environment: 3.6 ± 0.59 (63.04%) Direct leadership, colleagues: 3.98 ± 0.53 (81.55%) Internal regulations, salary, benefits: 3.89 ± 0.54 (75.44%) Job, learning & promotion opportunities: 3.89 ± 0.56 (77.55%) Healthcare centre: 3.99 ± 0.53 (82.07%) Average overall satisfaction: 3.88 ± 0.49 (75.56%)
[20]	Hiep Hoa District Health Centre, Bac Giang	215 healthcare workers	Salary & benefits: 19.1% Facilities: 23.7% Relationship with leadership: 19.1% Knowledge, skills, work effectiveness: 27.4% Learning & development: 36.3% Relationship with colleagues: 16.7% Interaction with the agency: 23.7%
[21]	Healthcare centres in Ho Chi Minh City	319 healthcare workers responsible for infectious disease prevention and control	Pay: 55.2% Promotion: 48.6% Supervision: 78.1% Fringe benefits: 32.9% Contingent rewards: 27.9% Operating conditions: 11.3% Coworkers: 83.4% Nature of work: 76.5% Communication: 74% Total satisfaction: 49.8%

The review demonstrates marked variation in job-satisfaction levels among HCWs at Vietnamese healthcare centres during 2015–2024, reflecting local differences in working conditions, service tier and management structures. As shown in Table 3, collectively, the included studies present a national overview, with satisfaction levels reported either as mean \pm standard deviation or as percentages. Comparative analysis of four specific settings - the Quang Binh CDC, the Bac Ninh CDC, healthcare centres in Ho Chi Minh City and the Hiep Hoa District Health Centre (Bac Giang) - pinpoints the key determinants of satisfaction and thereby informs targeted policy solutions. Four principal domains emerge as decisive: the work environment, intra-organisational relationships, remuneration and benefits, and opportunities for professional development.

Work environment: The work environment is a foundational determinant of HCWs' perceptions and performance. In Quang Binh, satisfaction with the work environment reached 74.0% (4.0 ± 0.6) - the highest score among all studies - reflecting well-maintained, safe facilities [18]. In CDC Bac Ninh, satisfaction was lower at 63.04% (3.6 ± 0.59), largely because the recent merger of several centres created a fragmented and poorly integrated infrastructure [19]. Ho Chi Minh City - where HCWs faced intense workloads during the COVID-19 pandemic - reported the lowest

satisfaction, only 11.3 % [21]. In Hiep Hoa district, Bac Giang province, satisfaction stood at 23.7 %, underscoring a severe shortage of adequate facilities and suitable work space [20].

Relationships with immediate supervisors and colleagues: Interpersonal ties are critical for sustaining professional motivation, particularly when material resources are limited. In Quang Binh, 88.2% of HCWs reported satisfaction with both their supervisors and co-workers, a result attributed to fair, respectful management practices that encourage staff and allocate tasks according to expertise [18]. The Bac Ninh CDC and healthcare centres in Ho Chi Minh City likewise showed high satisfaction - 81.55% and 78.1%, respectively - reflecting relatively stable organisational structures and a strong team-work culture [19], [21]. By contrast, at the Hiep Hoa District Health Centre (Bac Giang), only 19.1% of HCWs were satisfied with leadership and 16.7% with colleagues, the lowest figures in the entire review, indicating weak internal cohesion and under-developed managerial engagement [20].

Remuneration and fringe benefits: Salary and welfare provisions exert a major influence on workplace motivation, especially at primary-care level. Satisfaction with this domain reached 75.44% (mean 3.89 ± 0.54) in Bac Ninh and 66.6% (3.9 ± 0.7) in Quang Binh, largely because compulsory social - and health-insurance schemes were fully maintained and benefit payments were transparent [18], [19]. In Ho Chi Minh City, however, satisfaction fell to 55.2%: HCWs frequently cover multiple roles, yet base pay is low, bonuses are perceived as inadequate, and benefit allocation lacks transparency [21]. The most pronounced deficit was observed at the Hiep Hoa District Health Centre (Bac Giang), where only 19.1% of staff expressed satisfaction - reflecting serious shortcomings in securing a livable income: although nearly 96% of employees were primary earners for their families, fewer than 20% earned more than 10 million VND per month [20].

Learning and career-development opportunities: Opportunities for further study, skills enhancement and promotion are pivotal for sustaining long-term professional commitment. The Quang Binh CDC (78.8%) and the Bac Ninh CDC (77.5%) report the highest satisfaction in this domain, reflecting well-structured workforce-development policies, transparent appointment criteria and active support for staff pursuing advanced qualifications [18], [19]. By contrast, the Hiep Hoa District Health Centre registers only 36.3% satisfaction, indicating a serious deficit in strategic investment for training and professional growth - particularly among younger employees [20]. Although Ho Chi Minh City provides no quantitative figure, qualitative evidence points to pronounced dissatisfaction among early-career HCWs owing to limited access to preventive-medicine training, a critical competency during the pandemic response [21].

Overall job satisfaction: The Quang Binh CDC recorded the highest overall satisfaction - 84.6% (mean 4.3 ± 0.6) - reflecting a well-balanced combination of supportive work environment, effective leadership, and competitive benefits [18]. At the Bac Ninh CDC, overall satisfaction averaged 75.56% (3.88 ± 0.49) despite persistent shortcomings in infrastructure and staffing [19]. In Ho Chi Minh City, satisfaction dropped sharply to 49.8%, underscoring severe workload pressures that are not yet matched by adequate organisational support [16]. The most critical situation was observed at the Hiep Hoa District Health Centre, where overall satisfaction was only 20.9% - fewer than one in five HCWs expressed contentment - raising serious concerns about workforce retention at district level [20]. These stark disparities indicate that workplace conditions and human-resource policies vary widely across provinces; in particular, remuneration, fringe benefits and working conditions in Ho Chi Minh City and Hiep Hoa fall short of HCWs' expectations, substantially undermining their overall job satisfaction.

At the Quang Binh CDC, healthcare workers reported very high satisfaction with their immediate supervisors (92.7%), with the safety and adequacy of the work environment, and with relationships among colleagues (88.2%). These outcomes reflect targeted investments by the centre - rational office layout, enhanced security, additional protective equipment, and a range of staff-well-being initiatives (e.g., cultural events, sports programmes, and off-site retreats) - all of which foster a friendly and cohesive workplace [18].

In contrast to Quang Binh, the study conducted in Ho Chi Minh City found that overall job satisfaction among commune- and ward-level healthcare workers was below 50%, with several domains scoring beneath the midpoint. Only 11.3% of staff were satisfied with their working conditions - the lowest proportion reported across the three studies. The principal causes were extremely heavy workloads during the COVID-19 surge, coupled with stagnant remuneration: nearly 80% of employees earned less than 7 million VND per month, and many held three or more concurrent roles without commensurate support. Satisfaction with contingent rewards (bonuses and welfare benefits) was just 27.9%, while satisfaction with operating conditions stood at a mere 11.3%, highlighting persistent deficiencies in organisational structures and the ability to safeguard frontline staff welfare [21].

At the Bac Ninh CDC, overall job satisfaction averages 75.56%, yet a closer examination reveals several critical issues. Healthcare workers continue to rate their immediate supervisors and colleagues highly (81.55%) and express strong approval of learning and promotion opportunities (77.5%). By contrast, satisfaction with the work environment is considerably lower (63.0%). The main reason is the fragmented, cramped infrastructure that resulted from the recent merger of multiple facilities; many physical upgrades have lagged behind organisational growth. In addition, an imbalanced staffing mix - shortages of physicians and technicians alongside an excess of administrative personnel - has left many staff members feeling mismatched to their roles, undermining both commitment and motivation [19].

The survey at the Hiep Hoa District Health Centre (Bac Giang) reveals an alarming picture: overall job satisfaction stands at only 20.9%, meaning fewer than one in five respondents are content with their current work. This is not merely the lowest score among all sites examined; it also exposes multiple systemic bottlenecks. Component domains - salary and benefits (19.1%), work environment (23.7%), relationships with supervisors (19.1%) and colleagues (16.7%) - are all strikingly low, signaling deficiencies in both material conditions and psychosocial support. Satisfaction with learning and career-development opportunities is likewise poor (36.3%), indicating that the centre fails to offer a credible long-term development pathway for its staff. Key drivers include inadequate earnings - although 95.8% of HCWs are married, only 19.5% earn more than 10 million VND per month - out-dated infrastructure, lack of essential equipment and an unsafe work environment. Moreover, insufficient recognition and collegial support, particularly from leadership, leave staff feeling isolated and demotivated. These findings indicate a critical decline in professional morale at the primary-care level; if unaddressed, it risks the loss of experienced personnel and a consequent erosion of operational capacity within the district-level health system [21].

The findings indicate that centres offering transparent remuneration schemes, adequate infrastructure and supportive leadership styles consistently achieve higher levels of staff satisfaction. Conversely, facilities with limited resources - particularly those at commune or district level or in disadvantaged regions - are prone to dissatisfaction, diminished efficiency and elevated turnover risk. International evidence from Ethiopia [23] and India [24] confirmed the same pattern: sub-livable wages, inadequate facilities and insufficient managerial recognition are common drivers of low professional satisfaction.

Vietnam's health-system, however, is undergoing rapid policy and financing reforms that have widened disparities across tiers and regions. Urban centres generally enjoy better budgetary access but face heavier workloads and unbalanced staffing, whereas rural or district facilities confront simultaneous shortages of funds and support, leading to very low satisfaction - as exemplified by Hiep Hoa in Bac Giang. Beyond geographic differences, an underlying problem is the uneven implementation of human-resource policy. Where management is transparent, tasks match professional competence and internal recognition mechanisms exist (e.g., Quang Binh), satisfaction rises markedly. In centres lacking workforce planning, training opportunities or fair appraisal systems, professional commitment all but evaporates.

These observations confirm that raising HCW satisfaction cannot rely solely on pay increases or piecemeal infrastructure upgrades; it requires an integrated approach that combines safe working conditions, career-development pathways and equitable reward structures. Particular priority should be given to primary-care facilities in resource-constrained areas, where attrition risk is highest yet current policy attention is lowest.

Recommendations

Drawing on the evidence synthesised in this systematic review, we recommend an integrated, phased approach to improving job satisfaction among healthcare workers (HCWs), with particular emphasis on district and commune-level healthcare centres. Addressing disparities in infrastructure, management, and professional development - especially in these primary-level facilities - requires coordinated action across short, medium, and long-term horizons.

Short-term measures (≤ 12 months): Immediate priority should be placed on upgrading essential workplace infrastructure - particularly in under-resourced district and commune facilities. This includes the renovation of on-call rooms, the provision of personal protective equipment, and the establishment of dedicated rest areas to ensure occupational safety and comfort. In parallel, basic human-resource management practices should be strengthened. Key interventions include aligning task allocation with professional qualifications, conducting regular appraisal meetings with bidirectional feedback, and transparently communicating available career-development opportunities. These measures aim to stabilise working conditions and address acute dissatisfaction stemming from environmental and managerial shortcomings.

Medium-term measures (1–3 years): In the medium term, health centres should implement structured capacity-building programmes, with a particular focus on early-career HCWs. These programmes may include continuous professional development courses, mentorship systems, and financial support for postgraduate training. Concurrently, a systematic review and reclassification of job roles should be undertaken to reduce multiple-role burdens and improve internal role clarity and equity. These steps are essential for enhancing workforce retention and professional engagement, especially in rural and high-pressure settings.

Long-term measures (> 3 years): Over the long term, comprehensive reforms to primary-care financing mechanisms are necessary. These should grant greater fiscal autonomy to local facilities and ensure the transparent distribution of performance-based incentives. Additionally, differential allowances should be introduced to compensate for occupational risk, geographical hardship, or high workload intensity. To support data-driven policymaking, a cyclical HCW-satisfaction monitoring system should be institutionalised. This system will enable ongoing evaluation of job satisfaction levels and provide critical feedback for iterative adjustments to human-resource strategies at both provincial and national levels.

Collectively, these recommendations aim to establish a sustainable foundation for improving HCW job satisfaction, strengthening health system performance, and retaining qualified personnel in Vietnam's primary healthcare sector - particularly in areas most vulnerable to workforce attrition.

Limitations

This review has several limitations that warrant consideration. First, the literature search was restricted to two widely used databases - PubMed and Google Scholar. Although both are major sources of scholarly material, confining the search to these platforms may have excluded relevant studies indexed in more specialized databases. Second, the included studies employed heterogeneous measurement instruments, featuring divergent questionnaire structures, variable lists and rating scales. Such heterogeneity limited data standardization and precluded direct quantitative comparisons, confining the synthesis to descriptive and qualitative analyses and thereby weakening the generalizability and statistical power of the conclusions. Third, a quantitative meta-analysis was not conducted because the number of eligible studies was small and their designs and outcome reporting were highly dissimilar. Consequently, inferences are based primarily on narrative comparison, which further reduces statistical robustness. Finally,

although the STROBE checklist was used to screen study quality, the adoption of a $\geq 50\%$ -item threshold may not fully capture methodological differences across studies. Future reviews should consider stricter quality criteria to enhance the reliability of aggregated findings.

4. Conclusion

This systematic review demonstrates marked heterogeneity in job-satisfaction levels among healthcare workers at Vietnamese healthcare centres, driven by regional context, workplace conditions and internal management policies. The domains exerting the greatest influence are the work environment, relationships with supervisors and colleagues, remuneration and benefits, and opportunities for learning and career advancement. These findings provide essential empirical evidence for tailoring human-resource policies to the specific needs of each service tier and region. Embedding routine job-satisfaction monitoring into workforce planning - particularly at primary-care level - is a critical step toward improving service quality and retaining high-calibre staff. Future research should extend geographic coverage, employ standardised measurement instruments, and examine causal linkages among the determinants of satisfaction to inform evidence-based, sustainable health-policy decisions.

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