

Satisfaction Level of Health Worker with Work in Health Facilities in Vietnam: System Overview Study, Peroid 2006-2021

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Abstract: ***Purpose:** The study was to confirm the satisfaction level and related factors of medical staff with work in health facilities. **Design / Methodology / Approach:** Systematic review through searching, synthesizing and analyzing 28 studies published in peroid 2010-2020. **Findings:** The satisfaction level of medical staff is quite high (satisfaction rate is over 50%, average score is over 3.0). Factors with high satisfaction rates include: Relationship with leaders, colleagues (61, 3%-88, 6%); Opportunities for learning and advancement (55.6%-82.5%) and job position (81.8%-93.3%). Factors with not high satisfaction rates include: Salary (16.7%-31.11%); Non-salary (25.1%-42.3%); Management mechanism (20.3%); Facilities (23.7%-50.4%) and suspicion (26.8%-40%). Factors that are not/least related include: age, sex, living area. Related factors: social relationships and mechanisms for management and operation of the unit. **Originality/value/implication:** A systematic review to provide general information on the the satisfaction level and related factors, analysis of strengths, weaknesses and deficiencies that need to be supplemented for further studies on this issue.*

Keywords: Satisfaction of Health workers; Related factors; Systematic review, Public Health, Vietnam

1. Introduction

A famous hospital manager Joe Jansante said that "It is impossible to have patient's satisfaction without medical staff's satisfaction", Satisfaction with the work of health workers will ensure that adequate human resources are maintained and improved quality of health services at health facilities. .

Human resources are one of the most important factors that directly affect the performance and determine the success or failure of an organization. Job satisfaction refers to "employees' thoughts and feelings about their working environment and conditions".

Job satisfaction of health workers will ensure the maintenance of sufficient human resources and improve the quality of health services, especially in the context of "brain drain" from public to private hospitals and financial autonomy in public hospitals.

For many years, research activities on health worker satisfaction have been carried out by scientists on many subjects and health facilities, however, the overview research on this issue is still limited.

In order to continue to synthesize fully and comprehensively, we have collected and reviewed studies on health worker satisfaction in Vietnam, analyzed study

design, measurement tools. and some influencing factors and results found in the studies.

A systematic review to provide general information on the the satisfaction level and related factors, analysis of strengths, weaknesses and deficiencies that need to be supplemented for further studies on this issue. contributing to improve the quality of medical service for patients.

2. Methodology

Research time: from June 2021 to November 2021

Research method: Systematic review through searching, synthesizing and analyzing 30 studies published in peroid 2006-2021 in Vietnam.

Research subjects: Reports, theses, scientific articles, research topics on the satisfaction of medical staff at health facilities published in the period 2006-2021 (referred to as research).

Strategies for finding studies: Online searching (via Google tool). Manual searching (documents stored in libraries of hospitals and universities).

Review of studies: For each study found, the author collects and analyzes the following information such as study design, sample size, location, study time, research tools, research results achieved.

Table 1: Summary of the selection and review of studies

Steps	Criteria	Number of studies found
Initial search	Finding electronic database and published studies on satisfaction of medical staff	41
The 1st Review	The title of the topic, the research summary, contains the words related to the satisfaction	38

	of health workers. The research was conducted in Vietnam, the origin is clear	
The 2nd Review	The study has sufficient data for analysis (study design, sample size, location, toolkit, study results)	35
The 3rd Review	Eliminate duplicate studies	32
Include in analysis	Study that meets the selection criteria	28

3. Results and discussion

3.1. Measuring the satisfaction level of medical staff

Table 2: Toolkit to measure the satisfaction level of medical staff in studies

Author, year	Study design	Toolkit to measure the satisfaction
Nhuan, Le Thanh and et al (2009) [1]	Cross-sectional study	<i>The toolkit includes 7 groups of elements with 40 subsections:</i> <ul style="list-style-type: none"> - Relationship with leadership; - Relationship with colleagues; - Salary and benefits; - Learning, developing and asserting; - The agency's interactive environment; - Knowledge, skills and work results; - Infrastructure.
Quy, Ma Doan (2010) [2]	Cross-sectional study, quantitative combined qualitative	<i>The toolkit includes 7 groups of elements:</i> <ul style="list-style-type: none"> - Work; - Relationship with leaders, colleagues; - Enhance expertise; - Policy, salary and allowances; - Training and developing; - Management mechanism; - Working conditions.
Ha, Nguyen Pham and et al (2012) [3]	Cross-sectional study, quantitative combined qualitative	<i>The toolkit includes 7 groups of elements:</i> <ul style="list-style-type: none"> - Salary; - Regulations of the agency; - Regulations of work; - Supervision of superiors; - Relationship with colleagues; - Promotion, benefits, unexpected rewards, inside information; - Discrimination problem.
Bach, Tran Xuan and et al (2013) [4]	Cross-sectional study, quantitative combined qualitative	<i>The toolkit includes 5 groups of elements:</i> <ul style="list-style-type: none"> - Salary, benefits; - Relationship with leaders, colleagues; - Training and developing; - Current job and job evaluation; - Policy.
Yen, Ngo Thị Kim and Giang Dong Truong (2014) [5]	Cross-sectional study, quantitative combined qualitative	<i>The toolkit includes 4 groups of elements:</i> <ul style="list-style-type: none"> - Income; - Infrastructure; - Relationship with colleagues; - Relationship with the Health Department.
Huong, Nguyen Thi Thanh (2015) [6]	Cross-sectional study, quantitative combined qualitative	<i>The toolkit includes 8 groups of elements with 51 subsections:</i> <ul style="list-style-type: none"> - Work factors; - Successfulness; - Acknowledgement of achievements; - Advancement; - Salary, bonus, welfare allowance and service; - Attention of leaders and colleagues; - Working environment and conditions; - Management mode policies.
Binh, Nguyen Van (2016) [7]	Cross-sectional study	<i>The toolkit includes 5 groups of elements:</i> <ul style="list-style-type: none"> - Management environment; - Means of work; - Salary; - Relationship with colleagues; - Training and development.
Sinh Nguyen and et al (2017) [8]	Cross-sectional study	<i>The toolkit includes 5 groups of elements with 44 subsections:</i> <ul style="list-style-type: none"> - Work environment; - Direct leadership, colleagues; - Internal regulations, salary, benefits; - Job satisfaction, learning and promotion opportunities; - General satisfaction about the hospital.

Author, year	Study design	Toolkit to measure the satisfaction
Phung, Le Tan (2018) [9]	Cross-sectional study	<i>The toolkit includes 5 groups of elements with 44 subsections:</i> - Work environment; - Direct leadership, colleagues; - Internal regulations, salary, benefits; - Job satisfaction, learning and promotion opportunities; - General satisfaction about the hospital.
Thuong, Ta Van and et al (2019) [10]	Cross-sectional study	<i>The toolkit includes 3 groups of elements:</i> - Medical examination and treatment process; - Coordination of departments; - Coordination of district health insurance.
Ly, Tran Thi (2020) [11]	Cross-sectional study, quantitative combined qualitative	<i>The toolkit includes 5 groups of elements with 44 subsections:</i> - Work environment; - Direct leadership, colleagues; - Internal regulations, salary, benefits; - Job satisfaction, learning and promotion opportunities; - General satisfaction about the hospital.
Vu, Dang Hoang and et al (2021) [12]	Cross-sectional study	<i>The toolkit includes 5 groups of elements with 44 subsections:</i> - Work environment; - Direct leadership, colleagues; - Internal regulations, salary, benefits; - Job satisfaction, learning and promotion opportunities; - General satisfaction about the hospital.

Most of them are cross-sectional studies, no intervention studies. The Toolkit to measure the satisfaction level of medical staff in studies usually includes 5 groups of criteria: (1) Work environment; (2) Direct leadership, colleagues; (3) Internal regulations, salary, benefits; (4) Job satisfaction, learning and promotion opportunities; (5) General satisfaction about the hospital. In some studies on HIV/AIDS, the author has used the "stigmatization" factor to build a toolkit on health worker' satisfaction.

Most studies use the Likert scale to assess the satisfaction of health workers with a level of 1 to 5 points: (1 point-Very dissatisfied; 2 points-Dissatisfied; 3 points-Normal/Unknown; 4 points-Satisfied; 5 points-Very satisfied).

3.2 Satisfaction level of medical staff

Table 3: Satisfaction level of medical staff in studies

Author, year	Subjects, Sample size	Location research	Research results (rate of satisfaction of medical staff with factors)
Nhuan, Le Thanh and et al (2009) [13]	142 Health workers	Health facilities (general hospital, district preventive medicine center and commune health stations in a district) in Vinh Phuc province	-Relationship with leaders: 52.1% -Relationship with colleagues: 67.6% -Salary and benefits: 32.4% -Learning, developing and asserting: 52.5% -The agency's interactive environment: 53.5% -Knowledge, skills and work results: 50.0% -Facilities: 39.4% <i>General satisfaction with job: 71.1%</i>
Dung, Pham Tri and et al (2010) [14]	255 Health workers	Preventive Medicine Center at district level, Binh Thuan province	-Relationship with leaders: 27.5% -Relationship with colleagues: 32.5% -Salary and benefits: 17.6% -Opportunity to learn and develop: 36.9% -Work results: 47.5% -Facilities: 6.7%
Hang, Han Minh (2012) [15]	89 Health workers	Commune Health Stations, Kim Bang District, Ha Nam Province	-Working regulations: 29.2% -Advancement: 46.1% -Unexpected reward: 24.7% -Non-salary benefits: 57.3% -General satisfaction rate: 78.7%
Bach, Tran Xuan and et al (2013) [4]	252 Health workers	Commune Health stations in 2 urban and rural districts in Hanoi Capital	-Salary, bonus: 24.0% -Benefits: 25.1% -Relationship with leaders and colleagues: 41.8% -Facilities: 50.4%
Truc, Nguyen Thi (2014) [16]	230 Health workers	HIV/AIDS care and treatment medical facilities in Nghe An province	-General satisfaction with job: 57.1% -Relationship with superiors: 82.9% -Relationship with colleagues: 84.3% -Salary: 16.7%
Huong, Nguyen Thi Thanh (2015) [6]	128 Health workers	National Lung Hospital	- Work: 81.8% - Achievement: 66.1% - Recognition of achievements: 42.1% - Advancement: 58.7%

Author, year	Subjects, Sample size	Location research	Research results (rate of satisfaction of medical staff with factors)
			<ul style="list-style-type: none"> - Salary, bonus, welfare allowance and service: 51.2% - Concern of leaders and colleagues: 50.4% - Working environment and conditions: 47.9% - Policy and mode of administration: 55.4%
Binh, Tran Van and et al (2016) [7]	1.320 Health workers	Hospitals and medical centers with beds in Kon Tum province	<ul style="list-style-type: none"> - Working environment: 72.4% (3.84 points) - Direct leaders, colleagues: 82% (4.3 points) - Internal regulations, salary, benefits: 72.7% (3.86 points) - Job satisfaction, learning and promotion opportunities: 77.4% (3.94 points) - General hospital satisfaction: 83.9% (4.04 points) <p><i>General satisfaction rate of 5 factors: 86.2%, mean score: 3.94±0.09</i></p>
Sinh Nguyen and et al (2017) [8]	354 Health workers	An Giang Central General Hospital	<ul style="list-style-type: none"> - General satisfaction rate with 5 groups of factors is 76.6% - Medical staff in administrative, pharmaceutical and examination departments have higher satisfaction rates - Health workers with post-graduate degrees have higher satisfaction rates
Ha, Nguyen Thanh and et al (2019) [17]	102 Health workers	Medical Center of Dak Ha District, Kon Tum Province	<ul style="list-style-type: none"> - General satisfaction rate of health workers with 5 groups of factors: 77.5% - Average score: 3.8 ± 0.5
Ly, Tran Thi (2020) [11]	150 Health workers	(1) National Endocrine Hospital; (2) National K Hospital; (3) Can Tho General Hospital (4) Can Tho University of Medicine and Pharmacy Hospital (5) Quy Hoa Hospital of Leprosy and Dermatology	<ul style="list-style-type: none"> - Working environment: 76.9% (4.62 points) - Direct leaders, colleagues: 86.8% (4.45 points) - Internal regulations, salary, benefits: 71.6% (3.96 points) - Job satisfaction, learning and promotion opportunities: 82.5% (4.37 points) - General hospital satisfaction: 87.3% (4.52 points) <p><i>General satisfaction rate: 81.02% (4.38/5 points)</i></p>
Vu, Dang Hoang and et al (2021) [12]	268 Health workers	All departments of Resuscitation-Emergency departments, Cho Ray hospital	<ul style="list-style-type: none"> - Working environment: $3, 5 \pm 0, 8$ - Direct leaders, colleagues: $3, 7 \pm 0, 7$ - Internal regulations, salary, benefits: $3, 6 \pm 0, 8$ - Job satisfaction, learning and promotion opportunities: $3, 6 \pm 0, 8$ - General hospital satisfaction: $3, 8 \pm 0, 8$ <p><i>General satisfaction rate: $3, 63 \pm 0, 8$</i></p>

The average satisfaction rate of health workers is over 50%. Health workers with post-graduate degrees have higher satisfaction rates than health workers with college and university degrees. Health workers in administrative and pharmaceutical units have higher satisfaction rates than health workers in clinical and subclinical units. Health workers working at central health facilities have a higher satisfaction rate than local levels, the lowest is at the commune level.

Areas with high satisfaction rate of health workers: (1) Relationships with leaders and colleagues; (2) Training and developing; (3) The current job.

Areas with low satisfaction rate of health workers: (1) Salary; (2) Social benefits other than salary; (3) Management Regulations; (4) Facilities; (5) Recognition.

3.3. Factors related to the level of satisfaction of health workers.

Table 4: Factors related to the level of satisfaction of health workers in studies

Author, year	Name of study	Factors related to the level of satisfaction of health workers
Nhuan, Le Thanh and et al (2009) [13]	Health worker's satisfaction with job at grassroot medical facilities.	<p><i>Related factors include:</i></p> <ul style="list-style-type: none"> - Age groups (p=0, 001) - 7 groups of elements (p=0, 001) + Relationship with leaders; + Relationship with colleagues; + Salary and benefit; + Learning, developing and asserting; + The agency's interactive environment; + Knowledge, skills and work results; + Facilities.
Son Diem (2010) [18]	Determining the workload and the satisfaction of clinicians at Yen Bai province general hospital, 2020	<p><i>Related factors include:</i></p> <ul style="list-style-type: none"> - Number of patients examined and treated (POR=4.8; p<0.05) - Time of direct examination and treatment (POR = 24.2; p < 0.05) - Number of working hours and on-call hours in a week (POR = 7.1; p < 0.05) - Time for other activities during office hours (POR = 7.3; p<0.05)
Ha, Pham Nguyen and et al (2012) [17]	Stigma, an important source of dissatisfaction of health workers in HIV response in Vietnam: a	<ul style="list-style-type: none"> - <i>Factors related to satisfaction:</i> Training opportunities; Social recognition - <i>Factors related to dissatisfaction:</i> Inadequate compensation; Lack of

Author, year	Name of study	Factors related to the level of satisfaction of health workers
	qualitative study	positive feedback and support from supervisors; work stress; Large amount of work; Fear of infection; HIV-related stigma
Thang, Nguyen Huu (2014) [19]	Satisfaction of health workers with care and treatment at hospitals in Hoa Binh province	<i>Related factors:</i> - Gender (p<0.01) - Working time at the hospital (p<0.01)
Thao, Pham Thi Phuong (2015) [20]	Survey on the level of professional satisfaction of nurses at the hospital of Thai Nguyen University of Medicine and Pharmacy	<i>Factors associated with job satisfaction:</i> - Nature of work (r=0, 407; p<0.01) - Opportunities for training and promotion (r=0.469; p<0.01) - Relationship with colleagues (r=0.462; p<0.01)
Hieu, Nguyen Ngoc (2016) [21]	Research on factors affecting to job satisfaction of health workers at preventive medicine center in O Mon district, Can Tho city	<i>Influence factors:</i> - Working environment and conditions - Pay forms - Friendship collangue - Training and promotion opportunities
Sinh Nguyen and et al (2017) [8]	Evaluation of job satisfaction of health workers at An Giang Central General Hospital	<i>Related factors:</i> - Working position - Qualification
Thuong, Ta Van and et al (2019) [10]	Some factors related to satisfaction of health workers at commune health stations (CHS) in two extremely difficult districts, Hoa Binh province	<i>Related factors:</i> - Gender (OR = 1.98) - Training level (OR = 3.57) - There is a process guide (OR = 1.89) - Complete 14 steps of medical treatment process at CHS (OR = 2.07) - Having information technology application (OR = 1.89) - There is interest from the commune (OR = 6.90) - There is coordination with the departments and branches of the commune (OR=3.95) - Coordinate with the district social insurance agency (OR = 3.12) - Training level of medical staff (OR = 5.67; 1.14-28.13) - CHS with doctors working (OR =4.62; 1.94-11.09)
Ly, Tran Thi (2020) [11]	Situation and some factors related to the level of satisfaction of health workers at some hospitals in 2019	<i>Related factors:</i> - Major training expertise: (OR= 0.6; p<0.05). - Highest degree: (OR = 1.9; p<0.05). - Number of years working at the hospital: (POR=1.7; p<0.05). - Working position: (POR=0.4; p<0.05).
Phap, Phan Canh and et al (2021) [22]	Leadership behavior affects to job satisfaction and job performance of health workers at public hospitals in Ho Chi Minh City	<i>Related factors:</i> - 2 elements of exchange leadership behavior; - Active exception management; - Rewards according to achievements; - 1 element of transformational leadership behavior Satisfaction has the positive impact on work performance

Factors related to the satisfaction of health workers include: Working environment; Direct leaders, colleagues; Internal regulations, salary, benefits; Opportunities for learning and advancement. In some studies, the author used Cronbach's Alpha coefficient to test the reliability of the multipliers affecting the satisfaction of medical staff.

4. Recommendations

The satisfaction of health workers in health facilities is high in general. However, we recommend a plan and policy for health facilities, especially grassroots health care need to improve not only facilities and equipment but also areas with low satisfaction rate of health workers: Salary; Social benefits other than salary; Management Regulations and Recognition.

5. Limitations

The number of studies analyzed and synthesized was reviewed is not much (25 studies). The toolkit to measure and evaluate the satisfaction of health workers in each study are different, so the results of the review was not ideal for all health workers in Vietnam.

Most of the studies were found are cross-sectional studies, no intervention studies were found, so we can't have recommendations on interventions to improve the satisfaction level of health workers.

6. Conclusions

The review provides general information about the satisfaction of health workers: Satisfaction level, measurement and evaluation tools, related factors. It helps to guide for further researches on this issue. It also provides scientific basis to improve the satisfaction level of health workers in medical facilities.

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