

Patient's Satisfaction Level at Health Facilities in Vietnam: System Overview Study, Peroid 2006-2021

Ly Tran-Thi¹, Cong Cung-Van², Thang Tran-Quoc³, Dung Dao – Van⁴

^{1,2}National Lung Hospital, 463 Hoang Hoa Tham, Ba Dinh, Hanoi, Vietnam

³Institute of Community Medicine, 30D Kim Ma Thuong, Ba Dinh, Hanoi, Vietnam

⁴Thanglong University (Corresponding Author)

Abstract: Purpose: The study was to confirm the satisfaction level and related factors of patients with medical services in health facilities. Design/methodology/approach: Systematic review through searching, synthesizing and analyzing 35 studies published in peroid 2010-2020. Findings: The satisfaction level of patients is quite high (satisfaction rate is over 70%, average score is over 3.5). Factors with high satisfaction rates include: Information transparency; Behavioral attitude and professional capacity of medical staff. Factors with not high satisfaction rates include: Infrastructure; Accessibility; Service results. Factors that are not/least related include: age, sex, living area. Related factors: Waiting time for medical services, time for treatment, Infrastructure. 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 patients; Related factors; Systematic review, Public Health, Vietnam

1. Introduction

According to WHO, the quality of health services affects to patient's satisfaction and the patient's satisfaction can be assessed the effectiveness of health services.

For many years, research activities on patient's 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 patient's 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 May 2021 to October 2021

Research method: Systematic review through searching, synthesizing and analyzing 35 studies published in peroid 2006-2021 in Vietnam.

Research subjects: reports, theses, scientific articles, research topics on the satisfaction of patients 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	52
The 1 st Review	The title of the topic, the research summary, contains the words related to the satisfaction of health workers. The research was conducted in Vietnam, the origin is clear	45
The 2 nd Review	The study has sufficient data for analysis (study design, sample size, location, toolkit, study results)	40
The 3 rd Review	Eliminate duplicate studies	38
Include in analysis	Study that meets the selection criteria	35

3. Results and Discussion

3.1. Measuring the satisfaction level of patients

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

Author, year	Study design	Toolkit to measure the satisfaction
Yen, Pham Nhat (2008) [1]	Cross-sectional study, quantitative combined qualitative	<i>The toolkit includes 6 groups of elements:</i> <ul style="list-style-type: none"> - Access to service; - Communicating and interacting with medical staff; - Communicating and interacting with doctors; - Tangible objects; - Health care results; - Quality of medical examination and treatment.
Lien, Nguyen Thi and et al (2007-2010)) [2]	Cross-sectional study	<i>The toolkit includes 3 groups of elements with 12 subsections:</i> <ul style="list-style-type: none"> - Communication skills of health workers. - Professional qualifications of health workers. - Organization of examination and treatment at the hospital.
Thinh, Nguyen Cong (2011) [3]	Cross-sectional study, quantitative combined qualitative	<i>The toolkit includes 5 groups of elements with 20 subsections:</i> <ul style="list-style-type: none"> - Tangible elements; - Trust; - Ability to meet; - Level of sympathy; - Guarantee.
Van, Bui Thi Duong (2011) [4]	Cross-sectional study, quantitative combined qualitative	<i>The toolkit includes 5 groups of elements with 38 subsections:</i> <ul style="list-style-type: none"> - Convenience in medical examination and treatment; - Expenses for medical examination and treatment; - Waiting time for medical examination and treatment; - facilities for medical examination and treatment; - Attitudes and instructions of health workers.
Tuyen, Nguyen Manh and et al (2012) [5]	Cross-sectional study, quantitative combined qualitative	<i>The toolkit includes 5 groups of elements with 32 subsections:</i> <ul style="list-style-type: none"> - Time to access health services; - Communicate and interact with health workers; - Communicate and interact with doctors; - Tangible objects; - Results of examination and treatment.
Ly, Nguyen Ngoc (2013) [6]	Cross-sectional study, quantitative combined qualitative	<i>The toolkit includes 4 groups of elements with 28 subsections:</i> <ul style="list-style-type: none"> - Mental care for the patients; - Health counseling and education; - The relationship between nurses and patients; - Practice nursing care activities.
Thang, Tran Sy and et al (2014) [7]	Cross-sectional study	<i>The toolkit includes 4 groups of elements with 28 subsections:</i> <ul style="list-style-type: none"> - Friendly communication of Nursing; - Informing and guiding for patients; - Nursing's help and support for the patient; - Order and hygiene of the patient room
Du, Vu Van (2016) [8]	Cross-sectional study	<i>The toolkit includes 4 groups of elements:</i> <ul style="list-style-type: none"> - Infrastructure; - Time to access health services; - Communicate and interact with health workers; - Treatment results.
Cam, Tran Thi Hong (2017) [9]	Cross-sectional study, quantitative combined qualitative	<i>The toolkit includes 5 groups of elements with 31 subsections:</i> <ul style="list-style-type: none"> - Access to medical services; - Transparency of information and procedures for medical examination and treatment; - Facilities and equipment to serve patients; - Behavior, professional capacity of health workers; - Results of medical service delivery.
Cha, Hoang Thi Bich and et al (2018)) [10]	Cross-sectional study	<i>The toolkit includes 4 groups of elements with 18 subsections:</i> <ul style="list-style-type: none"> - Access to service; - Nursing care; - Doctor's treatment; - Facilities for medical examination and treatment.
Hoi, Tran Thi Bich and et al (2019) [11]	Cross-sectional study	<i>The toolkit includes 2 groups of elements:</i> <ul style="list-style-type: none"> - Attitude of health workers; - Quality of vaccination service.
Ly, Tran Thi and at al (2020) [12]	Cross-sectional study, quantitative combined qualitative	<i>The toolkit includes 5 groups of elements with 31 subsections:</i> <ul style="list-style-type: none"> - Access to medical services; - Transparency of information and procedures for medical examination and treatment;

Author, year	Study design	Toolkit to measure the satisfaction
		<ul style="list-style-type: none"> - Facilities and equipment to serve patients; - Behavior, professional capacity of health workers; - Results of medical service delivery.
Van, Nguyen Le Hong and et al (2020)	Cross-sectional study	<p><i>The toolkit includes 5 groups of elements with 31 subsections:</i></p> <ul style="list-style-type: none"> - Access to medical services; - Transparency of information and procedures for medical examination and treatment; - Facilities and equipment to serve patients; - Behavior, professional capacity of health workers; - Results of medical service delivery.

Most of them are cross-sectional studies, no intervention studies. The Toolkit to measure the satisfaction level of patients in studies usually includes 5 groups of criteria: (1) Access to medical services; (2) Transparency of information and procedures for medical examination and treatment; (3) Facilities and equipment to serve patients; (4) Behavior, professional capacity of health workers and (5) Results of medical service delivery.

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 patients

Table 3: Satisfaction level of patients in studies

Author, year	Subjects, Sample size	Location research	Research results (rate of satisfaction of patients with factors)
Lien, Nguyen Thi (2007-2010) [2]	460 Patients and their family	Hanoi Heart Hospital	<ul style="list-style-type: none"> -Very satisfied: 13% -Satisfied: 78.8% -Unsatisfied: 8.2%
Thinh, Nguyen Cong (2010) [3]	168 Inpatients	Dong Da general hospital, Hanoi Capital	<ul style="list-style-type: none"> - Health services: 61.9% - Waiting time for medical examination and treatment: 60%
Giang, Tran Thi Ha (2011) [14]	300 Outpatients	The National Dermatology Hospital	<ul style="list-style-type: none"> - Facilities, equipment and environment of hospital: 78.3% - Waiting time for medical examination and treatment: 21.3% - Waiting time for test results: 26.3% - Communicating and interacting with health workers: 43.8% - Communicating and interacting with doctors: 66.7% - Results of medical service delivery: 57.3%
Anh, Nguyen Ba (2012) [15]	424 Inpatients	Viet Duc Hospital	<ul style="list-style-type: none"> - Hygiene status of faculty/room: 97.1% - Nursing care: 95.8% - Nursing attitude: 94% - Nursing communication: 91.4% - Quality of nursing care: 93.5%
Hanh, Le Thi My (2013) [16]	205 Outpatients	Cho Ray Hospital	<ul style="list-style-type: none"> - Attitude of health workers: 81.5%-90% - Medical examination and treatment process: 93.2%
Phuoc, Nguyen Ngoc and et al (2014) [17]	408 Inpatients	Cardiovascular Institute – Bach Mai Hospital	<ul style="list-style-type: none"> - Time to access health services: 87.7% - Communicating and interacting with health workers: 87% - Facilities: 84.6% - Treatment results: 89.7% - Quality of health services: 84.1%
Phi, Nguyen Van and et al (2015) [18]	277 Outpatients	Medical Center Tu Liem District, Hanoi Capital	<ul style="list-style-type: none"> - Time to access health services: 41.3%-82.5% - Communicating and interacting with health workers: 89.7%-94.5% - Communicating and interacting with doctors: 86.9%-93.7% - Overall satisfaction with health services: 97.8%
Du, Vu Van and et al (2016) [8]	All inpatients at on-demand treatment department	The National Maternity Hospital	<ul style="list-style-type: none"> - Time to access health services: 92% - Waiting time for discharge procedures: 81.2% - Communicating and interacting with health workers: 88% - Facilities: 89.2% - Treatment results: 93.4% - Overall satisfaction with health services: 91%
Cha, Hoang Thi Bich and et al (2018) [10]	347 Patients and their family	My Loc General Hospital, Nam Dinh Province	<ul style="list-style-type: none"> - Access to services: 71.07%-90.05% - Nursing care: 65.58%-93.94% - Doctor's treatment: 81.02%-91.32% - Facilities: 81.78%-92.38%
Hoi, Tran Thi Bich and et al (2019) [11]	300 mothers with children under 1 year old used the expanded immunization service	5 Commune health stations, Vinh Bao district, Hai Phong city	<ul style="list-style-type: none"> - Attitude of health workers + Very interested: 19% + Interested: 43.7% + Normal: 37.7% + Cold: 0.2% - Quality of expanded vaccination: + Very good: 3.7%

Author, year	Subjects, Sample size	Location research	Research results (rate of satisfaction of patients with factors)
			+ Good: 54% + Acceptable: 42% + Very poor: 0.3%
Ly, Tran Thi (2020) [12]	300 patients (150-Inpatients and 150 Outpatients)	(1) Nationnal 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	- Attitude, communication, professional capacity of health workers: 87.4% - Facilities and equipment to serve patients: 64.6% - Transparency of information and procedures for medical examination and treatment: 84.8% - Access to health services: 78.4% - Results of health services delivery: 77.3%
Van, Nguyen Le Hong and et al (2020)) [13]	400 People >= 18 years old using medical services	Center for Disease Control in Thanh Hoa province (CDC)	- Access to services: 54% - Transparency of medical information and procedures: 98.5% - Facilities: 84.3% - Attitude, professional capacity: 100% - Overall satisfaction: 94.8% - Average score: 4-4.6/5

The average satisfaction rate of patients is over 70%. Satisfaction rate of inpatients is higher than that of outpatients. Areas with high satisfaction rate of patients: (1) Attitude, communication, professional capacity of health workers; (2) Information transparency in medical examination and treatment; (3) Results of health services delivery.

Areas with low satisfaction rate of patients: (1) Accessibility to health services; (2) Waiting time for medical examination and treatment; (3) Facilities and equipment to serve patients.

3.3. Factors related to the level of satisfaction of patients

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

Author, year	Name of study	Factors related to the level of satisfaction of patients
Huong, Bui Thi Thu (2009) [19]	Evaluation of patients' satisfaction about the quality of medical examination and treatment at the medical examination department, Tien Du general hospital, Bac Ninh province.	<ul style="list-style-type: none"> The older the age group, the higher the satisfaction level (P<0.05). The average satisfaction score of the "farmer" group is higher than that of other groups (P<0.05).
Trung, Pham Huu (2011) [20]	Evaluation of satisfaction of inpatients with AFB (+) at Hanoi Lung Hospital, 2011	<p>5 factors related to patient's satisfaction with p<0.001, including:</p> <ul style="list-style-type: none"> Waiting time for medical examination and treatment; Infrastructure; Communication and care of health workers; Communication and care of the doctor; Health care results.
Tu, Tran Thi Cam (2012) [21]	Research the satisfaction of patients about medical examination and treatment at Hue Central Hospital, 2012	<p>5 factors related to patient's satisfaction with p<0.05, including:</p> <ul style="list-style-type: none"> Age group; Academic level; Communicating and interacting with health workers; The patients live in Hue City; The patients use the usual room in hospital.
Dung, Nguyen Tri (2014) [22]	Research the satisfaction of patients and some related factors about medical examination and treatment at the Department of Examination, Dong Thap General Hospital, 2014	<p>Factors related to patient's satisfaction, including:</p> <ul style="list-style-type: none"> Living area. Education level. <p>Factors NOT related to patient's satisfaction, including:</p> <ul style="list-style-type: none"> Age; Gender; Occupation; Subjects of medical examination.
Duong, Hoang Minh (2016) [23]	Evaluation of patient's satisfaction level at the National Lung Hospital, 2016	<p>Factors related to patient's satisfaction, including:</p> <ul style="list-style-type: none"> Gender; Duration of inpatient treatment. <p>Factors NOT related to patient's satisfaction, including:</p> <ul style="list-style-type: none"> Age; Subjects of medical examination.
Cam, Tran Thi Hong (2017) [9]	Evaluation of patient's satisfaction level about using health services at some public hospitals	<p>2 groups of factors related to patient's satisfaction including:</p> <ul style="list-style-type: none"> Group of demographic and socioeconomic factors: Education level; Occupation; Ethnicity; Household's standard of living; Health status of patients. Group of elements constituting health services: Transparency of

Author, year	Name of study	Factors related to the level of satisfaction of patients
		information; Infrastructure; Service provider.
Hoi, Tran Thi Bich and et al (2019) [11]	Satisfaction with expanded vaccination service and some related factors among mothers with children under 1 year old at Commune Health Station, Vinh Bao District, Hai Phong, in 2019	<ul style="list-style-type: none"> • There is a difference in satisfaction level between the group of mothers who do not often receive pre-vaccination counseling (46.6%) and the group of mothers who regularly receive pre-vaccination counseling (80.3%). • There is a difference in satisfaction level between the group of mothers who are not regularly counseled after vaccination (62.1%) and the group of mothers who are regularly counseled after vaccination (79.5%)
Ly, Tran Thi (2020) [12]	Situation and some factors related to the level of satisfaction of patients at some hospitals in Vietnam	<p><i>Factors related to patient's satisfaction, including:</i></p> <ul style="list-style-type: none"> • Sex; • Duration of inpatient treatment <p><i>Factors NOT related to patient's satisfaction, including:</i></p> <ul style="list-style-type: none"> • Age group; • Subjects of medical examination

Factors related to the satisfaction of patients include: Waiting time for medical examination and treatment; Infrastructure; Medical examination and treatment procedures. Factors NOT related to patient's satisfaction, including: Age; Gender; Occupation and Subjects of medical examination.

4. Recommendations

The satisfaction of patients 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 patients: Waiting time for medical examination and treatment; Communicating and interacting with health workers; Health care results.

5. Limitations

The number of studies analyzed and synthesized was reviewed is not much (30 studies). The toolkit to measure and evaluate the satisfaction of patients in each study are different, so the results of the review was not ideal for all patients 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 patients.

6. Conclusions

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

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