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Factors related to satisfaction of the in-patients at 7A Military Hospital in 2019

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ABSTRACT

Background: Patient perception of medical services has been accepted as an important indicator of healthcare quality worldwide, including Vietnam. Researches on the satisfaction rate of the patients and factors influence it is necessary to devise better strategy of medical services and treatment. *Objectives:* This study aimed to describe the satisfaction rate of in-patient treated in the 7A Military Hospital (Ho Chi Minh City, Viet Nam) from April 2019 to Dec 2019 and evaluate the factors associated with patient satisfaction. *Materials and methods:* The study was performed on 600 in-patients treated at 7A Military Hospital using a descriptive, cross-sectional approach. Patient data was collected via an interview with a questionnaire based on the instruction of the Ministry of Health. Satisfaction score was based on Likert scale. The related factors were determined by univariate logistical regression analysis. *Results:* Satisfaction rate was 84.2% amongst the investigated patients. Aged over 60 and non-insured patients were significantly less satisfied than other groups ($p < 0.05$). Satisfaction was not significantly different between genders, marital status, incomes, number of visits to the hospital, and education levels ($p > 0.05$). *Discussion:* Satisfaction rate was high in comparison with average level in Vietnam and some other facilities aboard. Assessments of satisfaction associated factors were varied between studies and might be related to patient's perception of satisfaction concept and the study background. *Conclusion:* Patient satisfaction rate was satisfactory but could be and should be further improved. Historical and cultural background, experiences, gender-related traits and health status of the patients required more attention to better understand the underlying mechanism and devise suitable approach for each patient.

Keywords: satisfaction, perception, healthcare, medical service, in-patients

1. INTRODUCTION

Beside the traditional assessment of professional practice standards, the satisfaction and perception of patients on the medical care has been increasingly accepted as the important indicator for the medical quality of the healthcare centers as healthcare is more seen as a customer oriented sector and the patients are more knowledgeable and more capable of judging the medical services. Moreover, higher satisfaction also indicates higher commitment and a more lasting relationship with the medical center. Patient satisfaction assessment has been mandatory in France since 1996, in England since 2002, and in Germany since 2005 (Al-Abri & Al-Balushi, 2014; Al-Assaf, 2009; Chandra *et al.,* 2018; Chen *et al.,* 2016; Yogesh & Gaurav, 2011)

In Vietnam, the Ministry of Health has standardized the quality assessment of the health system and paid attention to the response and evaluation of the patient to improve the quality of the medical services. The Resolution 6858-QD-BYT of the Ministry puts the patients at the highest priority and requires the high attention of the patient satisfaction to timely identified and fixed the problems in treatment and healthcare. (https://thuvienphapluat.vn/van-ban/the-thao-y-te/Quyet-dinh-6858-QD-BYT-Bo-tieu-chi-chat-luong-benh-vien-Viet-Nam-2016-331011.aspx) (In Vietnamese). There have been studies on several aspects of patient satisfaction in several healthcare centers in Vietnam (Le *et al*., 2017; Phung *et al.,* 2017; Vu & Nguyen, 2017)

The 7A Military Hospital is a central, end-line, general healthcare facility of the 7thMilitray Region in Vietnam with the scale of 400 hospital beds. Therefore, the Hospital considers the quality control via guarantee of patient satisfaction as one of the most important healthcare mission. Consequently, this study was performed to describe and assess the satisfaction rate of the in-patients treated at 7A Military Hospital, and evaluate several of the potential factors associated with patient satisfaction. The study result was expected to provide references and basis for future solution and improvement of the medical quality and patient care in the 7A Military Hospital and in the medical system in general.

2. MATERIALS AND METHODS

Experimental participants, date and location

The study was performed on in-patients treated at clinical departments of 7A Military Hospital, aged over 18, and had no mental impairment. The participation was strictly voluntary. Exclusion criteria included patients with mental conditions or consciousness disorders, and patients which were also hospital staff.

The study was done from April 2019 to December 2019, at the day before discharge of each patient, at seven clinical departments of 7A Military Hospital.

Study designs

The study employed a descriptive, cross-sectional approach. Flow chart of the methodology was mentioned in chart 1.

Sampling population

The sample size of this study was calculated using the formula

$n = Z_{2(1-2)} * p(1-p)/d_2$

With Z1-α/2 = 1.96 and p = 61.2 the calculated sample size should be 365 patients (Le *et al.*, 2017). In this study 600 patients were planned to be selected for research since about 30% of the patients were expected to refuse participation. The number of selected patients was also estimated based on the data of in-patients available at the hospital for each months and the amount of allocated beds per department. The list of in-patients before discharging was available at the stored data of the hospital.

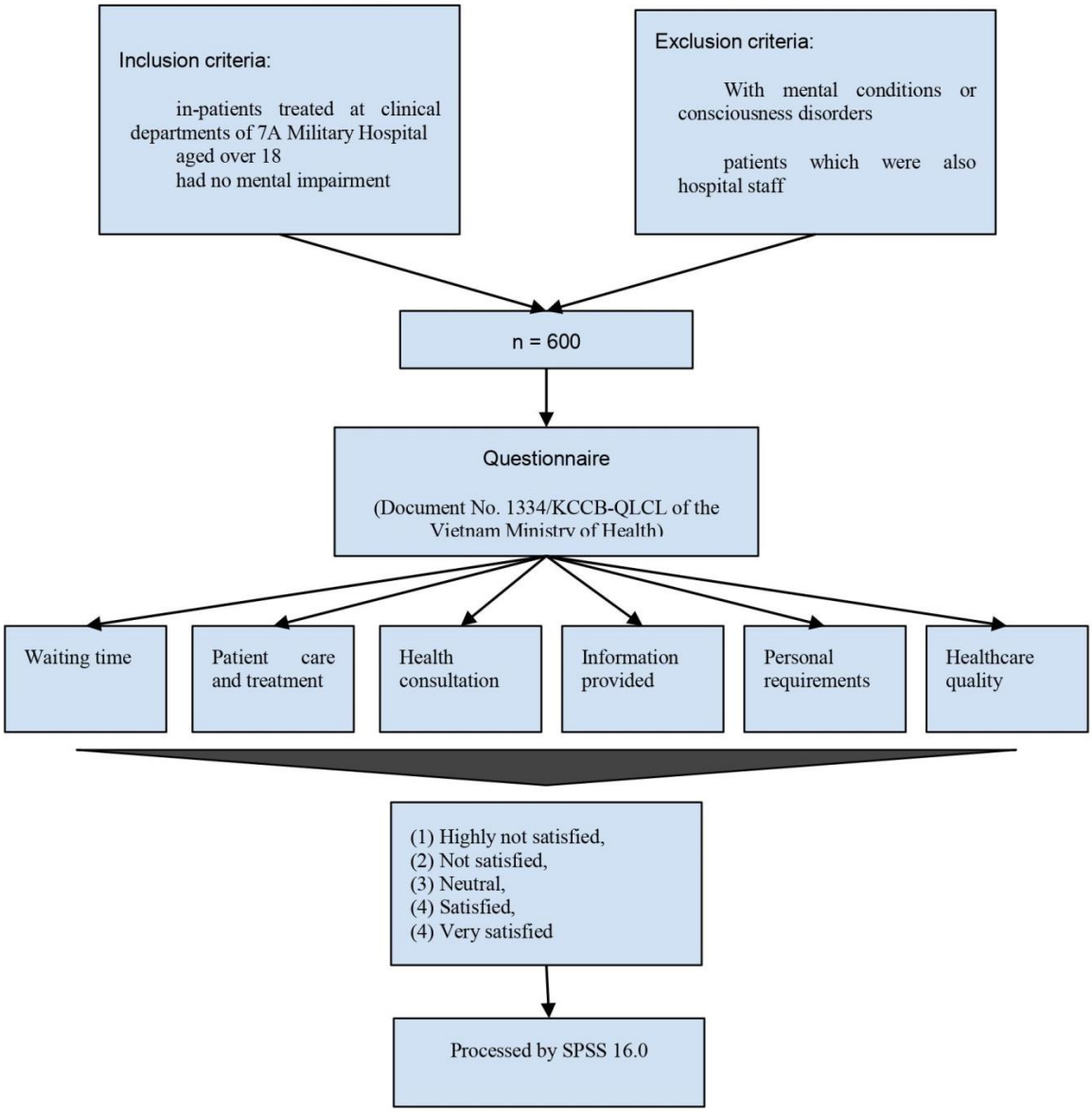

Chart 1 Flowchart of the methodology

Data collection

The data of each patient was collected via interviews with a questionnaire. The questionnaire was designed based on the form regulated by Document No. 1334/KCCB-QLCL of the Vietnam Ministry of Health (https://thuvienphapluat.vn/cong-van/The-thao-Y-te/Cong-van-1334-KCB-QLCL-huong-dan-kiem-tra-danh-gia-chat-luong-benh-vien-2015-295193.aspx) (in Vietnamese) and the

score was estimated based on Likert scale [9]: (1) Highly not satisfied, (2) Not satisfied, (3) Neutral, (4) Satisfied, (4) Very satisfied. The satisfaction of the patients was surveyed on the aspects of waiting time, patient care and treatment, health consultation, information provided, personal requirements, and healthcare quality. The tasks of interviewing and study informing were performed by the medical nurses.

Data analysis

The data was processed by SPSS 16.0. The factors were determined using univariate logistical regression analysis.

Ethical declaration

Medicine Scientific Research Ethics Committee of the 7A Military Hospital approved this study (Number: 93/QĐ-HĐYĐ-BV7A, date: 27.04.2019). The patients were well-informed of the study before hand and participation was strictly voluntary. The data was collected truthfully, objectively and was only used for research purpose. Patient privacy was strictly guaranteed. The patients and relatives were well-informed about their conditions and equal treatment and were asked to take part in the study. The participation was strictly voluntary, verified by signed documents.

3. RESULTS

General information

Most patients aged over 50 years and above (69.3%). Few patients was treated in the Departments of Intensive Care and Anti-toxicity (4.0%) and Infectious Diseases (12.6%), the remaining Departments had the rate of 17.2 – 22.7% (Table 1).

Table 1 Patient general information

Data category		n	%
Age groups	<20	6	1.0
	20–29	48	8.0
	30–39	45	7.5
	40–49	85	14.2
	50–59	140	23.3
	≥60	276	46.0
Departments	Traditional Medicine and Rehabilitation	136	22.7
	Internal Medicine (General)	132	22.0
	Internal Medicine (Cardiovascular and Respiratory)	123	20.5
	Surgery	103	17.2
	Infectious Diseases	76	12.6
	Intensive Care and Anti-toxicity	30	5.0
Total		600	100

Patient satisfactory

In general, 95 patients (15.8%) reported not satisfactory with the medical services of the hospital. Satisfaction in patients aged over 60 was significantly lower than others (Table 2, OR=1.87, 95% CI: 1.05 – 3.21, p < 0.05), in patients with no medical insurance was significantly lower than the ones with insurance (Table 3, OR = 2.53; 95%CI: 1.41 – 4.49; p < 0,05). The difference in satisfactory between genders, marital status, incomes, number of visits to the hospital, and education levels was not significant (Table 2 – 7, p >0.05).

Table 2 Satisfaction between different ages and genders

Data category			Not satisfactory	Satisfactory	OR CI 95%	p
Ages	≥ 60 years	n	54	222	1.87 (1.05 – 3.21)	< 0.05
		%	19.6	80.4		
	< 60 years	n	47	283		
		%	14.2	87.3		

Genders	Male	n	47	283	0.86 (0.48 – 1.49)	> 0.05
		%	14.2	85.8		
	Female	n	43	227		
		%	15.9	84.1		

Table 3 Satisfaction between different patients with and without insurance

Medical Insurance		Not satisfactory	Satisfactory	OR CI 95%	p
Yes	n	38	112	2.53 (1.41 – 4.49)	< 0.05
	%	25.3	74.7		
No	n	53	397		
	%	11.8	88.2		

Table 4 Satisfaction between different income levels

Monthly income		Not satisfactory	Satisfactory	OR CI 95%	p
≤ 2 million VND	n	49	261	1.18 (0.66 – 2.04)	> 0.05
	%	15.8	84.2		
> 2 million VND	n	41	249		
	%	14.1	85.9		

Table 5 Satisfaction between different marital statuses

Marital status		Not satisfactory	Satisfactory	OR CI 95%	p
Single / divorced / widowed / separated	n	19	119	1.18 (0.66 – 2.04)	> 0.05
	%	13.8	86.2		
Married	n	71	391		
	%	15.4	84.6		

Table 6 Satisfaction between different number of hospital visits

Number of visits		Not satisfactory	Satisfactory	OR CI 95%	p
< 5 times	n	34	179	1.24 (0.72 – 2.27)	> 0.05
	%	16.9	83.1		
≥ 5 times	n	54	333		
	%	13.9	86.1		

Table 7 Satisfaction between different education levels

Education levels		Not satisfactory	Satisfactory	OR CI 95%	p
Junior secondary education or below	n	53	276	1.18 (0.67 – 2.19)	> 0.05
	%	16.1	83.9		
Senior secondary education or above	n	37	234		
	%	13.7	86.3		

4. DISCUSSION

Satisfaction rate was 84.2% amongst the investigated patients. The satisfactory in the An Phu district general hospital – An Giang (Phung *et al.,* 2017), the National Hospital of Obstetrics and Gynecology (Vu & Nguyen, 2017), and in the 108 Military Central Hospital (Le *et al.,* 2017) were 88.5%, 91%, and 91.4%, respectively. The Patient Satisfaction Index recorded by the Vietnam Ministry

of Health and Vietnam Initiative, in Vietnamese) in 2018 was 4.04/5.00, equal to 80.8% satisfaction rate. It can be concluded that the satisfactory rate in the 7A Military Hospital was higher than the average level in Vietnam, although several hospitals achieved a higher level. Some studies reported the satisfaction rate ranged from as low as 63.2% to as high as 89.75% (Al-Assaf, 2009; Chandra et *al.,* 2019; Chen *et al.,* 2016; Adhikary *et al.,* 2018). AlRyalat *et al*. (2019) recorded 93% "excellent", "good", "very good" assessment of the patients in Jordan University Hospital. Yogesh and Gaurav (2011) reported overall 6.16/7.00 score. It can be said that the satisfaction rate in 7A Military Hospital was not different from other healthcare facilities, but better outcome should be the aim for the Hospital.

In our study the patients aged above 60 was significantly less satisfied than younger ones ($p < 0.05$). This was similar to the study of Le *et al*. (2017). Studies such as Al-Assaf (2009) and Chandra *et al*. (2019) and observed a reverse result of significantly more satisfaction in elder patients, the reason was believed to the more reasonable expectation of old patients with more medical experience. Jaipaul and Rosenthal (2003) while agreed with the above argument, also mentioned that in certain cases dissatisfaction coupled with old age as the declining health put more pressure on the medical services, and the patients familiar with old healthcare customs might see modern models as intimidating while younger generations might favor the modern active patient participation. We propose a further study of the treatment for geriatric patients in 7A Military Hospital and other clinical centers to have a better understanding and solution of the treatment of aged people. The patients without medical insurance in our study were also significantly less satisfied that the ones had ($p < 0.05$). The reason probably was due to higher expectation of non-insured patients as they choose the medical center based on their own preferences and financial capability. Odonkor *et al*. (2019) also observed significantly higher satisfaction in insured patients. However, Le *et al*. (2017) observed no significant relationship between satisfaction and insurance. Devadasan *et al*. (2011) reported higher satisfaction in studied patients but not all cases were significantly different, and in certain cases the dissatisfaction stemmed from the perception that insurance must couple with better treatment.

We did not observe significant correlation between patient satisfaction and genders, education level, income, marital status and number of hospital visits. Le *et al*. (2017) also had similar observation except times of medical examination and genders were not mentioned. Other studies reported variedly. For example Al-Assaf (2009) reported less satisfaction in men due to the gender inequality complex in Iran resulted in higher demands in male patients, and also less satisfaction in unmarried patients due to their less satisfaction in general life, and in patients with higher education due to their critical tendency. On the other hand, Chen *et al*. (2016) reported a higher satisfaction in male inpatients due to their satisfaction of the attitudes and services of the staffs, the authors also observed influence of occupation overall and of marital status on several aspects. Chandra *et al*. (2019) found significant association with genders, waiting time, patient trust and number of visits.

It can be considered that the evaluation of satisfaction and related factors varied considerably between studies. The reason may be both the treatment quality and the subjective perception of satisfaction from the patients, shaped by body conditions, gender-related traits, culture and historical context, and habit and experience. Adequate understanding of the patient background of the above factors is essential not only to explain the mechanism of influence on patient satisfaction, but also to develop suitable attitudes and care approaches for different patients with different circumstance. The satisfaction rate of 7A Military Hospital was high compare with the general level of Vietnam and with other medical facilities aboard, however further improvement is possible and is essential to maintain the medical quality.

5. CONCLUSION

Amongst 600 investigated in-patients treated in 7A Military Hospital, the satisfaction rate was 84.2%, better than the average level of Vietnam. Aged over 60 and non-insured patients were significantly less satisfied than other groups ($p < 0.05$). Satisfaction was not significantly different between genders, marital status, incomes, number of visits to the hospital, and education levels ($p > 0.05$). Better attention and understanding of patient background is necessary for studies of the underlying mechanism and improvement in treatment.

Declaration

Scientific Responsibility Statement

The authors declare that they are responsible for the article's scientific content including study design, data collection, analysis and interpretation, writing, some of the main line, or all of the preparation and scientific review of the contents and approval of the final version of the article.

Animal and human rights statement

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. No animal or human studies were carried out by the authors for this article.

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Conflict of interest

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Contribution

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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