

Ambulatory Patient Satisfaction Indicators at Tugurejo Regional General Hospital in Semarang City

Chriswardani Suryawati^{1*}

¹ Faculty of Public Health, Universitas Diponegoro, Semarang, Indonesia

Abstract. Tugurejo Hospital is a Type B hospital operated by the regional government of Central Java Province. Each year, the hospital conducts patient satisfaction surveys. Between 83% and 94% of patients report being satisfied with the services provided by the hospital; however, there is a large variation in patient satisfaction between types /departments. Ambulatory (outpatient) services continue to see an increasing number of patients per day. While most existing research focuses on the factors influencing patient satisfaction, there is a pressing need for research on patient satisfaction indicators. Such research is crucial as it provides hospitals with practical tools and references to assess and improve patient satisfaction. This study aims to identify indicators of ambulatory patient satisfaction in Tugurejo Hospital. This observational study employs a quantitative approach. Data were collected cross-sectionally using a questionnaire and analysed descriptively and through principal component analysis. The sample consisted of 150 ambulatory patients. The highest levels of satisfaction were for customer service officers (98.7%) and waiting room comfort (98.7%), while the lowest satisfaction was for service announcements (58.7%). All measured variables were found to be related to ambulatory patient satisfaction. There were 65 satisfaction items with an extraction value above 0.800. Four components were identified: service products, the behaviour of hospital staff, communication, and hospital facilities. A total of 26 satisfaction indicators were identified. The hospital should review these indicators and findings to continue improving patient satisfaction.

1 Introduction

Indonesian hospitals are increasingly demanding high-quality services that meet patient expectations. This demand is driven by the country's expanding social economy and the widespread access to information enabled by technological advancements. Implementing the National Health Insurance program in January 2014, which now covers 90% of the population (approximately 250 million people), has dramatically improved access to healthcare services. Tugurejo Hospital, a type B hospital under the regional government of Central Java Province, is not merely a participant in this landscape but a leader. The hospital's dedication to achieving patient satisfaction is evident in its ongoing efforts to improve services, and the high levels of patient satisfaction are reflected in its annual surveys. This commitment significantly impacts the quality of services provided by the hospital [1].

The quality of hospital services can be reviewed from three components: 1). Hospital infrastructure, and 2). Hospital management processes include interpersonal, technical, and

* Corresponding author: chriswardani@lecturer.undip.ac.id

nursing management; and 3). Outcomes refer to the results of services, such as patient recovery or the effectiveness of other hospital services [2].

Hospital patient satisfaction is a crucial component of the quality of hospital services, alongside clinical professionalism, efficiency and effectiveness, safety, and overall patient. Satisfaction [3]. Customer satisfaction, or dissatisfaction, refers to the patient's response to the perceived discrepancy between their prior expectations and the actual performance of the hospital services after utilisation [4]. From the perspective of service providers, patient satisfaction is an effort to satisfy patient expectations and understanding needs. Satisfaction occurs when the services patients receive match their expectations [5].

Linder Pelz (in Krowinsky and Steiber) proposed ten elements that should be considered when assessing patient satisfaction: affordability, availability of resources, continuity of care, efficacy and effectiveness of outcomes/ results, financial consideration, humanity, availability of information, provision and delivery of information, environmental comfort, and the competence of healthcare providers. Patients can feel satisfied or dissatisfied after receiving all these services. Patient satisfaction is inherently subjective, influenced by factors such as knowledge and information, level of education, socio-economic status, and socio-cultural and religious values [6].

The SERVQUAL (Service Quality) model, developed by Zeithalm and Parasuraman, is frequently utilised as a conceptual framework for research on hospital patient satisfaction. This theory outlines five service quality dimensions: 1). Reliability refers to the ability to deliver promised services accurately and consistently; 2). Responsiveness denotes the willingness to assist consumers and enhance the speed of service delivery; 3). Assurance encompasses the provider's competence in ensuring safety and minimising medical risks, including skills and trustworthy behaviour; 4). Empathy (attention) involves understanding the emotional experiences of others and providing full attention to the patient with good communication; 5). Tangibles pertain to the physical appearance of hospital facilities and the professionalism of staff members [7].

Attitudes, behaviour, communication, staff friendliness, and ease of obtaining information rank high in patients' perceptions of hospital satisfaction. It is not uncommon for patients or their families to feel that the outcome does not align with their expectations. Yet, they remain satisfied when they experience a respectful attitude that acknowledges their feelings [3]. Other variables influencing patient satisfaction include level of education, socioeconomic and cultural background, occupation, personality, and life experiences. Age, education, occupation, ethnicity, socioeconomic status, and disease diagnosis are key patient characteristics that affect satisfaction. [6]

The Regulation of the Minister of State Apparatus Empowerment and Bureaucratic Reform of the Republic of Indonesia No. 16 of 2014, concerning Guidelines for Public Satisfaction Survey in Public Services, mandates that government institutions or agencies assess customer satisfaction at least once a year.

This Community Satisfaction Survey is a comprehensive measure of public satisfaction based on community opinions after receiving services from public service providers. The objectives of this survey are to : 1). Identify the weaknesses or strengths of each public service delivery unit, 2). Periodically measure the performance of public service units; and 3). Provide recommendations for policies aimed at improving public services.

That Regulation outlines nine variables that must be assessed: 1). Conditions or requirements, including technical and administrative management; 2). Service procedures between providers and service recipients, including complaints handling; 3). Service time refers to the duration required to complete services. 4). Fees/tariffs, referring to the charges for obtaining services; 5). Product or service specifications refer to the outcomes of each type of service as determined by set provisions. 6). Implementer competency is the ability of an implementer, including expertise, skills, and experience. 7). Implementing

behaviour, referring to the attitudes and behaviours of service staff; 8). Service declaration, representing the provider's commitment to deliver services following standards; and 9). We handle complaints, suggestions, and input, which refer to the procedures for submitting and addressing complaints from service recipients.

Tugurejo Regional General Hospital is a type B hospital operated by the regional government of Central Java Province. This facility offers 15 specialised clinics, including those for child growth, ear, nose, and throat (ENT), neurology, ophthalmology, dermatology, obstetrics, internal medicine, cardiology, surgery, medical rehabilitation, psychiatry, paediatrics, pulmonology, orthopaedic surgery, and nutrition.

The number of ambulatory visits to Tugurejo Regional General Hospital from 2017 to 2022 varied significantly, with figures ranging from 14,348 patients in 2017 to 9,801 patients in 2018, 11,234 patients in 2019, 6,741 patients in 2020, 6,872 patients in 2021, and 9,542 patients in 2022. The decline in ambulatory visits during 2020 and 2021 can be attributed to the COVID-19 pandemic, primarily affecting non-COVID-19 patients. However, in 2022, the number of patients increased as the recovery from the pandemic progressed. From annual surveys conducted in 2017, 2018, 2019, 2021, and 2022, Tugurejo Regional General Hospital reported ambulatory patient satisfaction at 83.29%, 90.42%, 89.32%, 90.16%, and 94.89%, respectively. In 2020, the hospital did not conduct a patient satisfaction survey due to the COVID-19 pandemic. These surveys utilised indicators outlined in the Regulation of the Minister of State Apparatus Empowerment and Bureaucratic Reform of the Republic of Indonesia No. 16 of 2014, which provides guidelines for public satisfaction surveys in public services.

The number of ambulatory patients at this hospital varies from year to year. Based on a series of community satisfaction surveys, the hospital managers asked: What are the satisfaction indicators among the hospital's outpatients? This inquiry will facilitate a more straightforward follow-up on the survey results and allow for a more precise focus on the areas that require improvement. If most patients are dissatisfied with hospital services, the number of patient visits to the hospital will decline. Conversely, high patient satisfaction will encourage patients to return for treatment or recommend the hospital to relatives and friends. Generally, there is no significant difference in the implications of high or low patient satisfaction concerning patient visits at government and private hospitals [6].

For a service-oriented business such as a hospital, customer satisfaction is crucial. Patients must follow a specific service procedure. The ambulatory service process begins with the patient arriving at the hospital, registering, waiting for an examination, being examined by a doctor for diagnosis and treatment, collecting medication at the hospital pharmacy, and finally paying for treatment. This forms a continuous, unbroken series [6].

Extensive research has been conducted on hospital patient satisfaction, primarily to determine the factors that influence it. These studies aim to identify the variables that affect. However, hospital managers often struggle to follow up on the research findings. For instance, while studies may reveal that doctor or nurse services influence patient satisfaction, the specific aspects of their services that serve as satisfaction indicators are often unclear. As a result, research at Tugurejo Regional General Hospital was designed to identify precise markers (indicators) of ambulatory patient satisfaction.

2 Method

This research aims to identify indicators of ambulatory patient satisfaction at Tugurejo Regional General Hospital. This observational study employs a quantitative approach. Data were collected cross-sectionally using a questionnaire and processed descriptively, with analysis conducted using Principal Component Analysis (PCA). Principal Component Analyses (PCA) is a statistical technique that extracts structure from a data set with many

dimensions. It reduces the dimensions of the observed data into smaller dimensions without losing significant information, thus offering a more concise representation of the data.

Data were collected from 150 ambulatory patients through questionnaires, with proportional representation based on clinic type. Seven clinics were selected from the 15 existing ones: ear-nose-throat, nerve, eye, obstetrics, internal medicine, surgery, and paediatrics. The number of samples from each clinic was proportional to the number of patients in June, July, and August 2022. Data collection was conducted in September 2022.

The criteria for selecting respondents were as follows: patients aged between 14 and 60 years (excluding pediatric patients), those who were conscious condition and able to communicate well, patients who had received services from the Tugurejo Regional General Hospital polyclinic at least once in the previous month, and patients willing to be interviewed. The questionnaire was developed using variables listed in the Regulation of the Minister of State Apparatus Empowerment and Bureaucratic Reform of the Republic of Indonesia No. 16 of 2014 concerning Guidelines for Community Satisfaction Surveys. This research received ethical approval from the Research Ethics Commission of the Faculty of Public Health, Universitas Diponegoro, with approval number 324/EA/KEPK-FKM/2022.

3 Results and Discussions

3.1 Respondent Characteristics:

Table 1 shows that most of the respondents are female (74.0%), with the primary source of financing from BPJS / Social Health insurance (93,3%). Most referrals come from Puskesmas (46.0%) and primary care physicians (25.6%). Additionally, 64.6% of patients have visited the hospital before, and 81.3% of respondents are from Semarang City. Regarding education, 42.7% have low education (elementary and junior high school), and 42.5% have completed senior high school. The majority of respondents are unemployed (homemakers and students) (60.0%), and most have a monthly income of no more than Rp.2.9 million (42.6%).

Table 1 Description of Respondent Characteristics

No	Variables	n	%
1	Sex		
	1. Man	39	26.0
	2. Woman	111	74.0
2	Source of finance		
	1. Social Health insurance/ social assistance for poor/ needy	60	40.0
	2. Social Health Insurance (independent participants)	80	53.3
	3. Private health insurance	1	0.7
	3. Out of pocket	9	6.0
3	Referral		
	1. Public Health Center (subdistrict)	69	46.0
	2. Primary Physician	38	25.6
	3. Primary Clinic	14	9.3
	4. Other hospitals	14	9.3
	5. Others	15	10.0
4	Patient status		
	1. New Patient	17	11.4
	2. Patients who have already visited	97	64.6
	3. Family	36	24.0

No	Variables	n	%
5.	Origin		
	1. Semarang city	122	81.3
	2. Out of Semarang City	28	18.7
6	Education		
	1. Elementary School	41	27.3
	2. Yunion High School	23	15.6
	3. Senior High School	64	42.5
	4. Diploma / Bachelor	22	14.6
7	Occupation		
	1. Civil Servant/Armed Forces/ Police	6	4.0
	2. Private Company	24	16.0
	3. Entrepreneur	23	15.3
	4. Students	7	4.6
	5. Others (homemakers/ do not work)	90	60.0
8	Income		
	1.0 – Rp.2.9 million	64	42.6
	2. Rp.3,0 million – Rp.3.9 million	52	34.7
	3. Rp.4,0 million – Rp.4.9 million	30	20.0
	4. >/ Rp.5 million	4	2.7

Table 2 shows that the highest levels of satisfaction were with customer service officers (98.7%), waiting room comfort (98.7%), officers conduct (96.7%), officers competency (94.7%), hospital facilities (94.7%), requirement administration (91.3%), and service fees/tariff (90.6%). However, the lowest satisfaction score service for announcements (58.7%), parking lot (64.0%), and information media (64.7%),

Table 2 also indicates that many patients are dissatisfied with several aspects of hospital services, including service procedures, waiting time, handling complaints and feedback, officer clarity, service announcements, parking lot, information media, waiting room comfort, toilets, and disability services.

Table 2 Frequency Distribution of Variables

No	Variables	Satisfaction		No Satisfaction	
		N	%	N	%
1	Requirements administration	137	91.3	13	8.7
2	Services procedure	124	82.6	26	17.3
3	Waiting time	111	74.0	39	26.0
4	Service fees/ tariff	136	90,6	14	9.4
5	Service products	130	86.7	20	13.3
	Handling complaints,	108	72.0	42	28.0
6	Suggestions, and feedback				
7	Officers clarity	114	76.0	36	24.0
	Doctors' and nurses'	142	94.7	8	5.3
8	competency				
9	Officers conduct	145	96.7	5	3.3
10	Service announcements	88	58.7	62	41.3
11	Parking lot	96	64.0	54	36.0
12	Security guard officers	128	85.3	22	14.7
13	Customer services officers	119	98.7	31	20.7
14	Information media	97	64.7	53	35.3

No	Variables	Satisfaction		No Satisfaction	
		N	%	N	%
15	The waiting room comfort	119	98.7	31	20.7
16	Hospital facilities	142	94.7	8	5.3
17	Toilet	117	78.0	33	22.0
18	Disabilities services	117	78.0	33	22.0

3.2 Correlation between variables

Table 3 shows that all 18 variables are correlated with overall ambulatory patient satisfaction. The highest correlations are found with officer's conduct, service procedure, service information, doctors' and nurses' competency, waiting time, hospital facilities, and waiting room comfort.

Table 3 Correlation between variables and total patient satisfaction

No	Variables	Correlation to total patient satisfaction
1	Requirements administration	0.655 (0,000)
2	Services procedure	0.774 (0,000)
3	Waiting time	0.721 (0,019)
4	Service fees/ tariff	0.456 (0,012)
5	Service products	0.523 (0,000)
6	Handling complaints, suggestions and feedback	0.632 (0,000)
7	Officers clarity	0.583 (0,000)
8	Doctors' and nurses' competency	0.746 (0,000)
9	Officers conduct	0,828 (0,000)
10	Service Information	0,754 (0,000)
11	Parking lot	0,632 (0,000)
12	Security guard officers	0,532 (0,000)
13	Customer services officers	0,672 (0,000)
14	Information media	0.614 (0,000)
15	The waiting room	0,712 (0,000)
16	Hospital facilities	0,732 (0,000)
17	Toilet	0,624 (0,000)
18	Disabilities/ special needs services	0,576 (0,000)

3.3 The Result of Principal Component Analysis:

The eighteen variables were translated into 65 questions, all of which had extracted values above 0.800 and were confirmed in new groups. The Principal Component Analysis produced four confirmed groups, which were found to have similar meanings and consist of twenty-six indicators: a). Service products, b). Behaviour of the hospital officers, c). Communication, and d) Hospital facilities. The details of these indicators are as follows:

a). Services product: 1). Guarantee of patient recovery, 2). Improvement in the patient's health condition, 3). Doctors' expertise and skills in medical services; 4). Doctors are disciplined and punctual. 5). Waiting time at the registration counter, 6). Waiting time for examination by a doctor at the polyclinic. 7). Time to pick up medicine at the pharmacy counter.

b). Hospital officers' behaviour: 1). Admissions officers are friendly and polite, 2). Customer service officers are friendly and polite when serving patients; 3). Doctors provide friendly, prompt, and responsive services; 4). Nurses offer prompt and responsive services; 5). Parking attendants are responsive and helpful in finding parking spaces.

c). Communication: 1). Doctors explain the disease and the services that will be provided, 2). Customer service officers provide information regarding patient questions. 3). Patients can quickly get information via social media: SMS centre, Facebook, and Twitter. 4). An information board about the rights and obligations of hospital patients is easy to see; 5). An information board about hospital services and schedules is visible to patients. 6). Clear information about patient complaint procedures is available; 7). An information board about Badan Penyelenggara Jaminan Sosial (BPJS) Kesehatan is easy for patients to see.

d). Hospital facilities. 1). The patient waiting room is clean, neat and comfortable. 2). The ambulatory room is clean, tidy and comfortable. 3). There is guaranteed security and organisation of vehicles in the parking lot; 4). Parking is easy and sufficiently spacious; 5). The hospital grounds are neat, clean, and attractive (with plenty of plants). 6). The toilet is clean, odorless, has sufficient water and is safe (not prone to falls/slips.) 7). some facilities make it easier for disabled people to access services.

Several research findings in Indonesia support the results of ambulatory patient satisfaction indicators. Terms of service, service procedures, service time, service costs, service type specifications, competency of medical personnel, officer behaviour, complaint handling, suggestions and input, and infrastructure are all related to outpatient satisfaction at Lahat Regional Hospital. The most dominant variables influencing satisfaction are facilities and infrastructure [8].

Effective communication between nurses and patients regarding treatment has increased outpatient satisfaction [9, 10]. The interpersonal relationship variable, specifically two-way communication between medical staff (nurses, doctors) and patients, is the most dominant factor in ambulatory patient satisfaction, followed by the medical staff's ability and technical competency [11].

The importance of reducing waiting times for outpatient services in hospitals was also noted in studies at Lubukpakam General Hospital, Kota Bogor Regional Hospital, and PGI Cikini Hospital, as waiting times are closely related to patient satisfaction [12–14].

In Indonesia, on-time service (opening hours) and waiting time for doctors' services are still problematic in most hospitals. Law of the Republic of Indonesia number 29 year of 2004 concerning Medical Practice, a doctor/dentist in Indonesia can practice in three hospitals (including if he opens a private practice). In one hospital, a specialist doctor can work in outpatient services and as a doctor in charge of inpatient patients. This policy is caused by the lack of specialist doctors compared to the population served and the number of existing hospitals.

There are positive relationships between the patient's interest in the facilities and infrastructure and the patient's satisfaction at Sam Ratulangi Airforce Hospital in the City of

Menado [15]. Sufficient seating for patients and families waiting for service, the speed of pharmacy staff providing medicines prescribed by doctors, and the time of the registration process are priorities for improvement because these three variables were essential positions in the Performance Analysis Index in one of the private hospitals in Depok City [16].

Compared to several similar studies in other countries, the following research results tend to be identical/support the findings of outpatient satisfaction indicators in hospitals. Research on hospital outpatient satisfaction in China showed that patients' medical needs being met by doctors had the most relation to overall satisfaction, followed by satisfaction with doctors' service attitudes. However, the satisfaction scores of nurses were higher than those of doctors, as were medical costs, waiting time, prescription, diagnosis, and treatment time, and the hospital environment was the weakest satisfaction. Outpatients' sociodemographic characteristics (sex, age, occupation, monthly income, residence, and marital status) were related to various subtypes of satisfaction [17].

Research using a systematic review method in China showed that the highest satisfaction was the doctor's and nurses' attitude and responsiveness, and the lowest satisfaction was hospital hygiene, outpatient procedures, and exceptional waiting times. Patient satisfaction was also related to age, marital status, income, and education. Medical staff's professional skills and service attitudes were associated with ambulatory patient satisfaction [18].

Research on outpatient and inpatient satisfaction from national survey data in 27 provinces in China shows that overall satisfaction is commonly influenced by communication with doctors, hospital cleanliness, and acceptable charges. Outpatient satisfaction is also influenced by doctors' service time and waiting time [19]. Multivariate logistic regression results show that ambulatory patient satisfaction is influenced by politeness, respect, and confidentiality during the physical examination in Ethiopia [20].

In Jordania, the interaction between patients and healthcare personnel, especially doctors and nurses, the time it takes to complete all of the services, the cleanliness of the facility, and food services for patients (drinking machines and cafeteria) were related to ambulatory patients' satisfaction in the hospital [21].

In Vietnam, research results at a private hospital in Ho Chi Minh City mentioned five factors influencing outpatient satisfaction. Four factors positively affect the order of decreasing treatment outcomes: doctors' and nurses' professional capacity, the facilities and environment of the hospital, and hospital care, but service time is negatively affected [22].

The study's findings in the teaching hospital in Iran mentioned that most patients had a positive experience in the ambulatory division and thus evaluated the services as good. Service costs, physician consultation, hospital facilities, and patient information were the most critical variables to outpatient satisfaction [23].

4 Conclusion :

All research variables (18) are related to ambulatory patient satisfaction at the Tugurejo Regional General Hospital. The Principle Component Analysis produces four confirmed groups which tended to have the same meaning, namely: a). Service products, b). Behaviour of the hospital officers, c). Communication, and d) Hospital facilities. The four groups produced 26 indicators. Hospital managers are expected to be able to follow up on this research's results by carrying out a series of activities based on the 26 indicators of ambulatory patient satisfaction.

Acknowledgement:

I thank the Faculty of Public Health, Universitas Diponegoro, for funding this research and the Tugurejo Regional General Hospital for permitting data collection.

Funding Statement

Universitas Diponegoro funded this study.

Conflict of Interest Statement

The authors declare there is no conflict of interest in this study.

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