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Patients Satisfaction with Services of the Outpatient Department: Khmer Soviet Friendship Hospital in 2017, Cambodia

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Abstract

Background: A patient satisfaction survey is a tool for monitoring a hospital's quality of care in terms of clinical services provided, medicine availability, doctor behavior, other health professions, staff, cost of services, hospital infrastructure, physical comfort, emotional support and respect for patient preferences.

Objective: The purpose of this study was to determine the level of patient satisfaction and identify factors associated with Outpatient Department services at Khmer Soviet Friendship Hospital.

Methodology: From October 2nd to December 28th, 2017, a cross-sectional survey was carried out. Using the Systematic Random Sampling method, 400 people were chosen from the Outpatient Department of Khmer Soviet Friendship Hospital. A structured questionnaire was used to conduct face-to-face interviews. To test for associations at the 5% level of significance, the frequency distribution, percentages and Chi-square test were calculated for selected variables.

Result: The survey included 400 respondents (72% of whom were females and 28% of whom were males). One-third (28%) of respondents were between the ages of 18 and 30, 54% were between the ages of 31 and 50 and 18% were between the ages of 51 and 65. Overall, patient satisfaction was high, with more than 90% of respondents satisfied with physical facility (consultation rooms and seats), medical expense (consultation fee), pharmacy wait time, staff courtesy and quality of care (time spent, physical examination performed by doctors). Patients were less satisfied with hospital information (flow of direction (60.25%), service provision at front desk customer service (72.25%), cleanliness of toilets (68.14%), waiting time for payment (70.25%), laboratory service (72.52%) and registration (73.75%). The level of patient satisfaction was significantly related to respondents' gender, age groups, education, occupation, income, residence, number of visits and financial support.

Conclusion: Finally, overall patient satisfaction was high and it was significantly related to respondents' gender, age groups, education, occupation, income, residence, number of visits and financial support. To maintain and improve the high level of patient satisfaction and to accommodate all types of patients, there is a need to improve toilet cleanliness, hospital information, wait time reduction, staff politeness and the availability of essential drugs.

Keyword: *Satisfaction; Outpatient Department; Hospital Service*

Introduction

Quality of health care has emerged as a major goal for many countries, including Cambodia. The most visible function of any health system is health services. The provision of services refers to the inputs such as money, personnel, equipment and drugs that enable the health intervention to be delivered. The Cambodian Ministry of Health (MOH) faces numerous challenges in improving healthcare quality. For example, the public has many complaints about the poor quality of healthcare services provided by public hospitals. Patients, on the other hand, frequently complain about treatment and care, as well as dissatisfaction with health workers, workforce and sort operational at public facilities [1,2]. To identify the cause of insufficient health care services and poor quality of care, a patient satisfaction survey is necessary to monitor the hospital's quality of care, which includes clinical service provision quality, medicine availability, health profession behavior, cost of services, hospital infrastructures, physical comfort, emotional support and respect for patient preferences [3].

Patients' satisfaction can be used to evaluate hospital performance. Any dissatisfied patients will not return to hospitals, resulting in patient financial losses as well as excessive government spending. A high level of satisfaction indicates that the hospital is performing well. On the other hand, a low level of satisfaction can help hospital management improve their health care services.

One of the most important aspects of hospital administration is outpatient department (OPD) service, which can also refer to ambulatory care services. It is the clinic's mirror that reflects the hospital's operation. The outpatient department (OPD) is the first point of contact between patients and hospital staff and it sees a large number of patients. It is also a location that offers medical treatment that does not necessitate hospitalization [4,5].

Over decades, Cambodia's healthcare services have grown in response to patient demand. To properly address quality/significant issues in health-care delivery, perceptions from the demand side (patients) must be considered without delay. Patients' satisfaction is recognized as a key performance indicator in assessing the quality of care and accreditation agencies are increasingly requiring it in the monitoring of hospital care quality in order to identify care areas in need of improvement. Furthermore, patient satisfaction with care may influence patients' adherence to medical treatment and outcomes [6].

Literature Review

Socio-demography

Satisfaction may have an impact on socioeconomic factors, the accessibility of healthcare services and patients' experiences or perceptions of health services. The assessment of the association of patients' reported experiences, patients' satisfaction, background variables and patients' reported experiences of secret aspects of health care is required for the patients' satisfaction survey.

Danielsen., *et al*. (2010) discovered a link between demographic factors, users' reported experiences and user satisfaction: findings from three casualty clinics in Norway revealed that satisfaction may have an impact on socioeconomic factors, access to health care services, patient experiences and patient perceptions of health services. Patients' satisfaction surveys necessitate evaluations of the relationship between patients' reported experiences, patients' satisfaction, background variables and patients' reported experiences of confidential aspects of health care [7].

Bleich, Zaltin and Murray, 2009 in the European Union Country and Mandokhail, Keiwkarnka and Ramasoota, 2007 in Thailand investigated patients' satisfaction with the health care system in relation to the patients' experiences, sex, age, educational attainment and growth domestic products (GDP). Different expectations are captured by variation in these variables. Finding a positive relationship between age, education, GDP per capita, marital status and occupation with satisfaction is particularly noteworthy [8,9]. A study on Patient

Satisfaction in Malaysia's Busiest Outpatient Medical Care by Ganasegeran, Perianayagam, Abdul Manaf, Ali Jadoo and Al-Dubai (2015) discovered that gender, income level and purpose of visit were important correlates of patients' satisfaction [10].

As a result of correlation analysis, VADHANA, 2012 discovered that education was statistical evidence of a negative relationship with patient satisfaction in an outpatient department of an autonomous hospital in Phnom Penh. Patients with a lower level of education are more likely to be satisfied [11].

Ahsan., *et al*. (2012) found that females were more satisfied than males in medical and surgical wards of a tertiary care hospital. The majority of them had little education and were unemployed [12]. According to Nguyen., *et al*. 2011 in France, studied on determinants of patients' satisfaction in ambulatory oncology found that the socio-demographic factors were significantly linked to dissatisfaction with care, marital Status (living alone) is related to doctor information provision and youth is related to doctor availability. A higher monthly income was associated with lower satisfaction with the information provided by nurses or radiation therapists [6].

Hassali., *et al*. 2014 found that education, occupation and married status were significantly associated with information satisfaction in a tertiary care hospital in Kedah, Malaysia, while gender was rejected of association [13]. Another study conducted in Kedah, Malaysia by Al-Sakkak, Al-Nowaiser, Al-Khashan, Al-Abdrabulnabi and Jaber (2008) found that age and education were related to patient satisfaction, but there was no correlation between patient satisfaction and gender, marital status, occupational status, or monthly income [14].

Physical facilities

According to Al Fraihi and Latif's (2016) study on the evaluation of outpatient service quality in Saudi Arabia's Eastern Province, hospital physical environment played an important role in improving service quality, attractive outpatient environment and suitable outpatient services considered one of the most important reasons for patients to visit the hospital [15]. Otani, Herrmann and Kurz (2011) found that the most influential to patients' comfort in the environment where patients also expect that the rooms and bathrooms will be clean with quiet surroundings in a study on improving patient satisfaction in hospital care settings at the University of North Texas [16]. One of the most important factors influencing patient satisfaction is cleanliness, which is directly related to their health. Adekanye., *et al*. (2013) discovered that patients' satisfaction with healthcare services at a north central Nigerian tertiary hospital had a positive correlation with environmental cleanliness and comfort facilities [17]. According to Ahsan., *et al*. (2012)'s study in Pakistan, sanitation scores were lower than satisfaction levels because patients claimed that the cleanliness of the bathrooms was poor and needed to be improved [12].

Hospital information

Despite being part of a system designed to improve communication, information flow is frequently disrupted. Assefa, Mosse and Hailemichael (2011) conducted a study at Jimma University specialized hospital to assess client satisfaction with health service delivery. The main source of dissatisfaction was a lack of information about hospital services [18]. According to Brown., *et al*. 2015.'s study on exploring the patient and staff experience with the primary care process, both patients and staff identified potential pitfalls at information handoff throughout the primary care episodes and staff frequently identified the information transfer. Staff frequently identified the problem as information transfer itself. Patients were more likely to mention the consequences, such as long waits or frustration with having to repeat information. Another critical handoff occurred when patients were being wheeled into examination rooms, as information had to be transferred from patients to medical assistants and then to physicians. Many staff members said it was difficult to listen to, but few patients did [19]. Another study on Nurse-Physician Communication in Patient Care and Associated Factors in Public Hospitals of Jimma Zone, South West Ethiopia conducted by Hailu, Kassahun and Kerie, 2016 discovered that the overall perceived level of nurse-physician communication was nearly 50% for both perceived professional respect and satisfaction and perceived openness and sharing of patients' information on nurse-physician communication which can be prioritized some points focusing on nurse-physician communication in-

tervention. Mean scores of perceived respect, satisfaction, openness and sharing information were higher among nurses and physicians working in district/non-teaching hospitals [20].

Medical expense

Health spending has a significant impact on patient satisfaction. Adekanye., *et al*. (2013) found that public health spending appeared to be positively and statistically associated with patients' satisfaction with healthcare services at a north central Nigerian tertiary hospital. Because health services were perceived to be provided free of charge by the state, public spending on health had a huge impact on patient satisfaction. The cost of services had a negative effect but a weak correlation with satisfaction [17]. According to a 2016 study by Xesfingi and Vozikis, patients' satisfaction with healthcare systems varied across 31 countries: 28 EU Member States, Iceland, Norway and Switzerland. When the impact of socioeconomic and healthcare provision factors was assessed, it was discovered that among the socioeconomic variables, public health spending played a significant role in patients' satisfaction as a great shape and positive related patients' satisfaction, whereas private health spending is relatively negative [21]. Surur., *et al*. 2015 discovered that clients who were served for free had significantly higher levels of satisfaction than those who paid in a study at a university hospital in northwestern Ethiopia. The differences in the mean satisfaction levels of the pharmacy clients involved in the study were examined in relation to socio-demographic characteristics. Payment status was found to be statistically significant in independent samples tests on sections of socio-demographic variables. Clients served in the pharmacy without payment were found to have higher levels of mean satisfaction than clients who paid for the services received [22]. Li., *et al*. 2016 found that patients' satisfaction with outpatient and inpatient care was significantly related to the type of healthcare delivery setting in Jilin, China. Patients admitted to rural and tertiary hospitals complained about the high cost of treatment. In terms of inpatient care, patients in CHCs were more satisfied with treatment costs than patients in county hospitals [23].

Waiting time

In a university hospital in India, Dinesh, SINGH, NAIR and Remya (2013) stated that patients' waiting time was defined as the length of time from when the patients entered the out-patient clinic to when the patient actually left the OPD. It is a time for patient registration, routine doctor's appointments, emergency room treatment, laboratory/diagnostic tests, procedures and receiving test results. Almost everyone seeking medical care must wait [24]. In northwestern Nigeria, Oche and Adamu (2013) discovered that waiting time is a tangible aspect of practice that patients will use to judge health personnel more than their knowledge and skill [25]. According to Hassali., *et al*. 2014 in Kedah, Malaysia, waiting time was the most important factor influencing patient satisfaction. The time spent in the waiting area before consulting was identified as the source of the most dissatisfaction [14]. For patients, waiting time is a disadvantage. Meyer, Ringler, Bartsch and Fendrich (2016) discovered that waiting time has a significant impact on patient satisfaction in their study of patient waiting times in a polyclinic for surgery at the University Hospital Marburg. Short waiting times are important for patient satisfaction and are a major competitive factor [26]. Ahmad (2017) determined that the documented waiting time for registration and payment counters in Malaisia should be 15 minutes. Total waiting time from registration to consultation should be documented as 90 minutes [27]. According to a study conducted by Patel and Patel in India, long wait times at the OPD can have a negative impact on patient satisfaction. Patients' waiting time is an important indicator of the hospital's service quality. One factor influencing healthcare utilization is the amount of time a patient must wait to be seen. The patient perceives long wait times as a barrier to receiving service. Keeping patients waiting unnecessarily can be stressful for both the patient and the doctor. Waiting time, more than knowledge and skill, is the tangible aspect of practice that patients will use to judge health personnel [28]. Li., *et al*. (2016) found that waiting time was the most important factor influencing patients' satisfaction with public healthcare services in Kedah, Malaysia. Waiting time was found to be significantly related to patient satisfaction, with those who waited more than two hours being less satisfied with the service than those who waited less than one hour. Hassali., *et al*. 2014 discovered additional factors that influenced patient satisfaction, such as consultation length and patient registration process. As a result, improvements in health care that result in shorter wait times may increase patient satisfaction [13]. Outpatient care

from community health centers was significantly associated with a higher patient satisfaction ratio. Patients at county and tertiary hospitals complained about long wait times and their overall satisfaction with outpatient care was lower [23]. Chen., *et al*. (2010) conducted their research in a community hospital in Shanghai, China. Many patients complain about the long wait times. Long wait times at outpatient clinics have been identified as a major source of dissatisfaction with medical care delivery and a barrier to further use of healthcare facilities by affected patients [29]. Similarly, Shrestha (2015) found significant dissatisfaction with registration and waiting time after arriving at the OPD in a patient satisfaction survey conducted at Nepal Medical College and Teaching Hospital [30]. 2007 in Samut Sakhon, Thailand, Mandokhail, Keiwkarnka and Ramasoota Certain improvements are needed in terms of accessibility in terms of the schedule of the working hours of the OPD was adequate while comparatively less patients were agreed on waiting time for getting treatment from doctor and waiting time for getting prescription drugs, so the waiting time was the main concern of the patient [9]. Camacho Anderson, Safrit, Jones and Hoffmann (2006) discovered that long waiting times were associated with lower patient satisfaction at Wake Forest University in North Carolina. Reduced wait times may increase patient satisfaction and willingness to return to primary and specialty care outpatient settings. Furthermore, increased waiting time combined with decreased time spent with physicians correlates with significant drops in patient satisfaction [31].

Courtesy

Service providers who are courteous are friendly, polite, attentive, interesting and concerned. In North Texas, Otani., *et al*. (2011) stated that courtesy and respect of nurses and physicians toward patients are the most important for patients' feelings about hospitals. To improve patient satisfaction in hospital care settings, researchers discovered that the top priority for patients is to be treated with courtesy and respect by nurses and physicians [16]. In South Africa, Kabatooro, Ndoboli and Namatovu (2016) discovered that the clinician's friendliness was the main predictor of satisfaction [32]. Adekanye., *et al*. (2013) found that patients' satisfaction with healthcare services at a north central Nigerian tertiary hospital had a significant positive correlation with promptness of staff, communication level of staff and staff's relationship with patients. To maintain and improve the high level of patient satisfaction, it is necessary to promote positive staff and facility-related factors that engender satisfaction while mitigating those that engender dissatisfaction, particularly service delays. According to this study, the prompt, friendly attitude of staff and satisfactory communication with their patients have the strongest correlation with a high level of satisfaction [17]. According to Hassali., *et al*. (2014), dissatisfaction is usually related to communication, empathy, time and accessibility and health care professionals' attitudes toward their clients [13]. Patients' satisfaction was highly correlated with physicians' courtesy and information sharing. Listening behavior was also linked to patient satisfaction. Physician empathy was only weakly related to patient satisfaction, whereas physical attention (eye contact and body positioning) was not related to this factor at all. The physical appearances of the physicians, the total time of physician-patient interaction and the number of physical contacts between patients and physicians were also not significant predictors of patient satisfaction in this study. There were no significant differences in mean ratings of caring behaviors or satisfaction between male and female physicians [33].

Quality of care

Quality of health care is defined as a degree of performance in relation to a defined standard of interventions known to be safe and capable of improving health within available resources [34]. In Morocco, Soufi., *et al*. (2010) discovered that patient satisfaction is an important indicator of care quality. Measuring healthcare quality and improving patient satisfaction are becoming increasingly popular, particularly among healthcare providers and patients [35]. Puri, Gupta, Aggarwal and Kaushal (2012) found that reduced waiting time is important not only for patient satisfaction, but also for ensuring good doctor-patient communication. Doctors must spend time with patients in order to adequately communicate about their illness. According to one finding, patients were satisfied despite long wait times, delays in the completion of investigations and poor signage. It is possible that patients rating their interactions with doctors as positive and senior doctors being present and performing examinations in outpatient settings, will result in a high satisfaction rating [36]. Understanding

whether patients were satisfied with clinical care during consultation, according to Ssengooba (2016) in Kampala, Uganda, may be one of the avenues to improve early patient presentation to the clinic for early diagnosis as well as adherence to treatment for better treatment outcome. Patients who were pleased with their clinical consultation were more likely to return to the clinic for treatment follow-up and to adhere to treatment requirements [37]. According to a 2017 study conducted by Patel and Patel in India, 97.4% of patients reported that consulting doctors were available in the OPD at the time of their visit. 76.3% said they were examined in less than 5 minutes, 9.63% said they were examined in 5 - 15 minutes, 1.48% said they were examined for 15 - 30 minutes and 12.59% said they were not examined by a doctor for their complaint [28]. Consultation length varies widely from country to country and it is influenced by both patient and doctor characteristics. Ahmad (2017) defined consultation as the time it takes for a patient to enter the consultation room to the end of the consultation by medical officers or specialists in a study of patients waiting and consultation time in a primary healthcare clinic in Malaysia. By establishing benchmarks, the documented consultation time between medical officers or specialists and patients ranged between 10 and 20 minutes [27]. Kabatooro., *et al*. (2016) conducted a study on patients' satisfaction with medical consultations at Mulago Hospital in South Africa. Patient satisfaction was lowest when information was provided during the medical consultation. The following factors were significant predictors of patient satisfaction with medical consultation: being told the cause of illness, being told the name of illness, being told about future ways of preventing illness, being given information to take to the doctor who referred them and being given all the information they were expected to receive about their health. Patient confidence: being thoroughly examined and relieving concerns about illness were the most significant predictors of satisfaction [32]. According to a 2017 study at Tikur Anbessa Specialized Hospital in Addis Ababa, Ethiopia, disregard or late for patients' laboratory results may cause persistent disruption of treatment because a patient must return several times for the results and treatment. Given that laboratory results influenced more than 70% of all medical decisions, patient satisfaction needed to be prioritized as an important factor in evaluating laboratory services [38]. Ganasegeran., *et al*. 2015 discovered in Malaysia that increased waiting time combined with decreased time spent with the physician correlates with significant drops in patient satisfaction. Satisfaction with doctors' service orientation, 'time spent with doctors,' 'interpersonal manners,' and 'communication' during consultations was low [10]. Anderson RT, Camacho FT and Balkrishnan R (2007) found that shortening patient wait times and spending more time with patients to improve patient satisfaction would be counter-productive. The amount of time spent with the doctor was the best predictor of patient satisfaction. A bad doctor visit is linked to very low overall patient satisfaction [39]. According to K and B (2014), patients attending OPD at Mwananyamala hospital in Dar es Salaam, Tanzania, were generally dissatisfied with the quality of care. To ensure the availability of essential drugs, hospital management should focus on improving communication skills among OPD staff in terms of compassion, politeness and active listening, as well as improving clinicians' prescription skills [34].

Objectives of the Study

General objective

The purpose of this study is to determine the level of patient satisfaction with the Outpatient Department

at KSFH.

Specific objectives

- To describe the characteristics of patients in the Outpatient Department.
- Evaluate patients' satisfaction with services, with a focus on physical facilities, hospital information, medical expenses, waiting time, courtesy and quality of care.
- To investigate the relationship between socio-demographic factors and patient satisfaction levels.

Conceptual framework

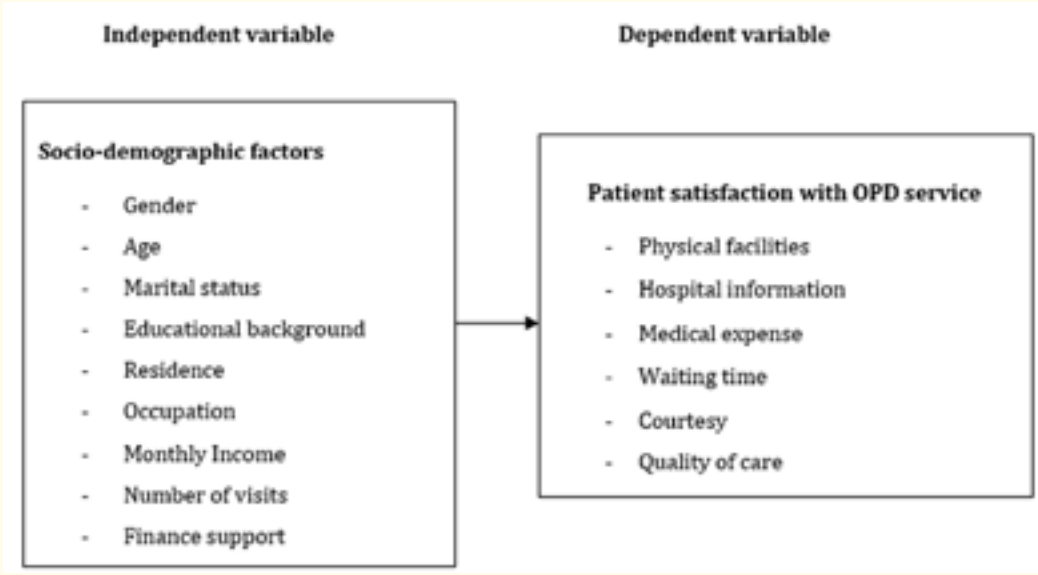

Figure 1: *The conceptual framework for patients' satisfaction using Aday and Anderson's health system model [40].*

Operational definition:

- **Patients' satisfaction:** The pleasant feeling that the patients get when they receive services at Outpatient Department.
- **Physical facilities:** Refers to general pleasantness of the atmosphere, sufficient examination rooms, the comfort of seats, the attractiveness of waiting rooms, easy to find places, neat, quiet, clean and toilet.
- **Hospital information:** Refers to the general information of the hospital services that patients get from the staffs, board and clarity of signs of direction.
- **Medical expense:** Refers to the affordability of the amount of money spent on consultation and laboratory test.
- **Waiting time:** Refers to the time of patients waiting in a hospital before being seen by one medical service like before the register, payment, consultation, laboratory and pharmacy.
- **Courtesy:** Refers to politeness in one's attitude and behavior, respect, attentiveness (friendly and communication) and care shown by the clinical personnel.
- **Quality of care:** Refers to the providers' skills and ability in treatment and sufficiency of health facilities. In this study, it is included treatment receiving from doctors, clearly explanation of treatment, an opportunity provided by doctors for asking about the illness, respect and skillful of nurses, availability of prescribe medicine from hospital, result lab on time and an attention paid by the hospital officers in cases of any problem [41].

Methods

Study design

A hospital-based cross-sectional study. The purpose of this design was to determine the level of patient satisfaction and the relationship between socio-demographic factors and patient satisfaction levels.

Setting

The research was carried out at the Khmer Soviet Friendship Hospital in Phnom Penh, Cambodia.

Study population

In 2017, patients visited the Outpatient Department of Khmer Soviet Friendship Hospital for general medicine. The respondents were 18 years of age or older (both male and female) because they were mature enough to answer questions independently at that age.

Sample size

The variable of greatest interest in calculating sample size was the proportion of patients satisfied with the services for estimating a single proportion using Fisher., *et al*. [42]:

$n=z^2 (PQ)/d^2$

Where:

z: Normal deviate corresponds to 95% level of confidence = 1.96

P: Is the estimated proportion of patient who satisfied with the services at Outpatient Department in Khmer Soviet Friendship Hospital. It was set at 50%.

Q=1-P

d= Absolute percentage of tolerable deviation from the true estimate. It is set at 5%.

Total sample size was 385 patients (round up to 400 patients) who were selected and interviewed.

Sampling

All patients who visited the Outpatient Department for general medicine after purchasing a drug from the pharmacy counter were chosen using systematic random sampling.

Informed consent

Before beginning the interview, all participants provided verbal consent and were informed of the study's objectives and the estimated time required completing the interview.

Inclusion criteria

1. The outpatients whose age between 18 years to 65 years old.
2. The outpatients who are accepted to give consents.

Exclusion criteria

1. Specialized OPD patient.
2. Patients who had mental problems.
3. Patients who needed emergency attention.

Data collection

Data were collected by two well-trained interviewers and one supervisor.

Questionnaires were developed and translated into the Khmer language. The questionnaire covers:

- Part A: General information regarding gender, age group, marital status, educational degree, residence, occupations, monthly incomes, number of visits to hospital and finance support.
- Part B: Physical facilities, hospital information, medical expenses, waiting time, courtesy and quality of care.

Patients were asked to rate, using Likert 5 scale, their level of agreement or level of satisfaction accordingly: 1= strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree [43].

Data collection was conducted during a period of 3 month from 02nd October to 28th December 2017 in OPD of KSFH.

Statistical analysis

Following data collection, the information was manually checked for completeness and consistency. The data was entered into Excel and analyzed using STATA version 14.0. STATA carefully examined and imputed missing data. The level of satisfaction was classified as 3 dissatisfied and 4 satisfied.

Descriptive statistics were presented in frequency tables after descriptive analysis. The Chi-square test was used to determine the relationship between socio-demographic factors such as gender, age group, marital status, education, address, occupation, monthly income, number of visits finance support and patients' level of satisfaction. The P-value for significance was set at 0.05.

Ethical consideration

Participants in the study provided verbally informed consent. The study's objectives were explained to participants and they were given written information. They have the right to refuse to participate at any time. More importantly, no participants' names were mentioned in this study. On September 3, 2017, the National Ethics Committee for Health Research (NECHR) reviewed and approved this study.

Result

Patients' characteristics

This study included 400 patients from various general outpatient departments. Table 3 shows the patients' socio-demographics, with the youngest patient being 18 years old and the oldest being 65 years old. In terms of gender, the majority of patients (71.25%) were females, while male patients were only (28.25%) and the majority of them were married (78.25%).

In terms of education, 34.75% of patients had a primary level of education, 54.25% had a secondary/ higher level of education and only 11% had no education.

In terms of occupation, the vast majority (48.75%) were workers. There were 8.5% of unemployed patients, 19.25% of farmers, 11.75% of self-employed patients and very few patients who were students, company employees, NGOs' employees, or others.

In terms of patients' average monthly family income, the lowest amount earned was less than or equal to 600,000 Riel and the highest amount earned was more than 1,800,000 Riel. Patients with the lowest family income were 40.5%, patients with family incomes ranging from 600,001 Riel to 1,400,000 Riel were 53.0% and the rest could earn more than 1,400,000 Riel per month were 6.5%.

Patients from the provinces (62%), as well as those from Phnom Penh (38%), used this hospital's services.

In terms of total hospital visits, 47.75% of total respondents visited for the first time, 43% visited 2 to 4 times and the rest visited the OPD more than 4 times.

For financial assistance to patients, the majority of total respondents used national social security fun, 40.75% used personal finance and 14% used equity funds, NGO and other sources (Table 1).

Socio-demographic Characteristics	N: 400	
	n	%
Sex		
Male	113	28.25
Female	287	71.75
Age		
18 - 30	111	27.75
31 - 50	214	53.50
51 - 65	75	18.75
Marital status		
Single	70	17.50
Married	313	78.25
Windowed / Separate	17	04.25
Education		
Illiterate	44	11.00
Primary	139	34.75
Secondary/ Higher	217	54.25
Occupation		
Unemployed	34	08.50
Farmer	77	19.25
Self-employed	47	11.75
Students	15	03.75
Worker	195	48.75
Company staff / NGOs' staff / Other	32	08.00

Income per month		
< = 600,000 Riel	162	40.50
600,001 Riel – 1,400,000 Riel	213	53.25
More than 1,400,000 Riel	25	06.25
Residence		
Phnom Penh city	152	38.00
Province	248	62.00
Number of visit		
First time	191	47.75
2 - 4 time	172	43.00
More than 4 time	37	09.25
Financial support		
Personal finance	163	40.75
NSSF	181	45.25
Equity fund / NGO / Other	56	14.00

Table 1: *Descriptive statistics of socio-demographic of patients availing OPD in KSFH.*

Patients' satisfaction with services of outpatient department

As shown in table 2, 3 and 6, the distribution and level of patient satisfaction with Outpatient Department services are described below.

Physical facilities

This section includes six questions about the consultation room, seat, noise, cleanliness, cleanliness of the toilet and ease of finding one place to another in relation to required services. As shown in table 2, more than 90% of participants agreed with "room for consultation is appropriate and seats are enough for waiting," with 95.25% and 91.00%, respectively, while only 65.50% and 68.14% agreed with "easy to find one place to another related to required services and availabilities cleanliness of toilet".

Variable	Total N	Strongly disagree		Disagree		Undecided		Agree		Strongly agree	
		1		2		3		4		5	
	N	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Physical facilities											
Room for consultation is appropriate	400	1	(0.25)	9	(02.25)	3	(0.75)	381	(95.25)	6	(01.50)
Seats are enough for waiting	400	0	(0.00)	31	(07.75)	2	(0.50)	364	(91.00)	3	(0.75)
No noise around the hospital	400	0	(0.00)	47	(11.75)	3	(0.75)	348	(87.00)	2	(0.50)
Availability of cleanliness?	400	0	(0.00)	35	(08.75)	5	(01.25)	356	(89.00)	4	(01.00)
Availability of cleanliness of toilet	204	4	(01.96)	61	(29.90)	0	(0.00)	139	(68.14)	0	(0.00)
Easy to find one place to another place related to required service	400	3	(0.75)	126	(31.50)	8	(02.00)	262	(65.50)	1	(0.25)

Table 2: *Descriptive statistics of patients 'satisfaction (Physical facilities).*

Hospital information

The section included five questions about information provided by hospital staff and boards, as shown in table 3. According to table 5, the majority of respondents (84.50%) agreed on receiving information from other staff when needed, whereas only 59.75% agreed on flow direction.

Variable	Total N	Strongly disagree		Disagree		Undecided		Agree		Strongly agree	
		1		2		3		4		5	
	N	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Hospital Information											
Information counter	400	4	(1.00)	98	(24.50)	5	(1.25)	289	(72.25)	4	(01.00)
Board information on regulation, time patient visit……	400	0	(0.00)	103	(25.75)	34	(25.75)	262	(65.50)	1	(0.25)
Flow direction	400	2	(0.50)	130	(32.50)	27	(06.75)	239	(59.75)	2	(0.50)
Working hour	400	0	(0.00)	13	(03.25)	91	(22.75)	294	(73.50)	2	(0.50)
Other staff when need	400	3	(0.75)	30	(07.50)	24	(06.00)	338	(84.50)	5	(01.25)

Table 3: *Descriptive statistics of patients 'satisfaction (Hospital Information).*

Medical expense

It asked two questions about the cost of consultations and laboratory tests. According to table 4, the majority of participants (93.87% and 86.30%, respectively) agreed that "consultation and laboratory tests were affordable".

Variable	Total N	Strongly disagree		Disagree		Undecided		Agree		Strongly agree	
		1		2		3		4		5	
	N	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Medical expense											
Consultation expense here is affordable	163	1	(0.61)	8	(04.91)	0	(0.00)	153	(93.87)	1	(0.61)
Laboratory test expense here is affordable	73	1	(01.37)	8	(10.96)	1	(01.37)	63	(86.30)	0	(0.00)

Table 4: *Descriptive statistics of patients 'satisfaction (Medical expense).*

Waiting time

This section included five questions about waiting at a registration desk, at a payment service, before consulting with doctors, at a laboratory service and at a pharmacy service. Table 5 showed that the majority of participants (92.75%) agreed on waiting time at the pharmacy, while only 69.5%, 70.99% and 73.50% agreed on waiting time at the payment service, registration desk and laboratory service, respectively.

Variable	Total N	Strongly disagree		Disagree		Undecided		Agree		Strongly agree	
	N	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Waiting time											
At register desk	400	4	(01.00)	98	(24.50)	3	(0.75)	294	(73.50)	1	(0.25)
At payment service	400	5	(01.25)	80	(20.00)	34	(08.50)	278	(69.50)	3	(0.00)
Waiting time before consulting with doctor	400	4	(01.00)	57	(14.25)	1	(0.25)	337	(84.25)	1	(0.25)
At laboratory service	131	1	(0.76)	35	(26.72)	0	(0.00)	93	(70.99)	2	(01.53)
At pharmacy service	400	1	(0.25)	19	(04.75)	2	(0.50)	371	(92.75)	7	(01.75)

Table 5: *Descriptive statistics of patients 'satisfaction (Waiting time).*

Courtesy

This section was divided into two sections that asked about the friendliness and communication skills of hospital staff. It consisted of six questions about the friendliness of register personnel, cashiers, nurses, doctors, laboratory personnel and pharmacy personnel. As shown in table 6, more than 83% of participants agreed with hospital staff friendliness and communication, with the exception of laboratory staff friendliness and communication, which were agreed upon by 79.40% and 79.39%, respectively.

Variable	Total N	Strongly disagree		Disagree		Undecided		Agree		Strongly agree	
		1		2		3		4		5	
	N	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Courtesy											
Friendly											
Register staff	400	4	(01.00)	24	(06.00)	3	(0.75)	366	(91.50)	3	(0.75)
Cashier	400	0	(0.00)	28	(07.00)	36	(09.00)	333	(83.25)	3	(0.75)
Nurses	400	0	(0.00)	10	(02.50)	12	(03.00)	370	(92.50)	8	(02.00)
Doctors	400	0	(0.00)	10	(02.50)	3	(0.75)	380	(95.00)	7	(01.75)
Laboratory staff	131	3	(02.29)	22	(16.79)	1	(0.76)	104	(79.40)	1	(0.76)
Pharmacy staff	400	0	(0.00)	14	(03.50)	3	(0.75)	378	(94.50)	5	(01.25)
Good communication											
Register staff	400	1	(0.25)	12	(03.00)	0	(0.00)	385	(96.25)	2	(0.50)
Cashier	400	2	(0.50)	12	(03.00)	28	(07.00)	355	(88.75)	3	(0.75)
Nurses	400	0	(0.00)	23	(05.75)	7	(01.75)	363	(90.75)	7	(01.75)
Doctors	400	0	(0.00)	11	(02.75)	6	(01.50)	368	(92.00)	15	(03.75)
Laboratory staff	131	1	(0.76)	19	(14.50)	1	(0.76)	104	(79.39)	6	(04.58)
Pharmacy staff	400	0	(0.00)	6	(01.50)	1	(0.25)	379	(94.75)	14	(03.50)

Table 6: *Descriptive statistics of patients 'satisfaction (Courtesy).*

Quality of care

It consists of twelve questions about doctors' time, explanations, treatments, physical examination performance and nurses who listen carefully to patients, show respect and are skilled. It takes a short time on lab test results and pharmacy explanations for patients, who will return to this hospital the next time and recommend it to others. As shown in table 7, more than 80% of participants agreed with the overall quality of care, while only 76.75% agreed that "the drugs patients received from the hospital were sufficient".

Variable	Total N	Strongly disagree		Disagree		Undecided		Agree		Strongly agree	
		1		2		3		4		5	
	N	n	(%)	n	(%)	n	(%)	n	(%)	n	(%)
Quality of care											
During this hospital visit, did your Doctor…?											
Spend enough time with you and give you an opportunity to ask about your illness	400	1	(0.25)	20	(0.25)	2	(0.50)	371	(92.75)	6	(01.50)
Tell you about you illness / prognosis/time required for treatments	400	4	(01.00)	16	(04.00)	8	(02.00)	365	(91.25)	7	(01.75)
Treatment you received is good	400	0	(0.00)	23	(05.75)	40	(10.00)	327	(81.75)	10	(02.50)
Performed physical examination well	400	0	(0.00)	22	05.50)	8	(02.00)	361	(90.25)	9	(02.25)
During this hospital visit, did your nurse …….?											
Listen carefully to you	400	0	(0.00)	11	(02.75)	12	(03.00)	373	(93.25)	4	(01.00)
Show respect for what you had to say	400	0	(0.00)	15	(03.75)	11	(02.75)	371	(92.75)	3	(0.75)
Is skillful	400	0	(0.00)	16	(04.00)	29	(02.25)	349	(87.25)	6	(01.50)
Test result received on time as told to you by the lab	131	0	(0.00)	20	(15.27)	1	(0.76)	101	(77.10)	9	(06.87)
Direction for taking all medicine being clearly explained by pharmacist and understood by you?	400	1	(0.25)	17	(04.25)	0	(0.00)	368	(92.00)	14	(03.50)
The drugs you received from the hospital is enough	400	2	(0.50)	56	(14.00)	22	(05.50)	307	(76.75)	13	(03.25)
Will you return to this hospital next time for treatment	400	1	(0.25)	12	(03.00)	41	(10.25)	319	(79.75)	27	(06.75)
Would you recommend this hospital to your friends and family	400	0	(0.00)	6	(01.50)	29	(07.25)	321	(80.25)	44	(11.00)

Table 7: *Descriptive statistics of patients 'satisfaction (Quality of care).*

Factor association between socio-demography characteristics and satisfaction

The relationship between socio-demographic characteristics and satisfaction was assessed using chi-square scores and p-values (the significant level used in this test was 0.05).

Medical expense: Concerning medical expense satisfaction, it was discovered that there was no socio-demographic association with the affordability of the cost of consultation and laboratory tests.

Physical facilities: As shown in table 8, there was a significant relationship between age, marital status and monthly income and seat service satisfaction. The satisfaction with seat availability varied by age group. Older age groups were more satisfied than younger age groups and the difference in satisfaction was statistically significant at p value = 0.000.

In terms of marital status, single (84.29%) and married (92.97%) people were satisfied, while windowed/separate people were completely satisfied. It was then discovered that windowed/separate groups were more satisfied than singles and married people. The statistical associations between marital status and seat service satisfaction had a p-value of 0.040. The satisfaction with seat availability varied according to respondents' income. Low income groups were more satisfied than high income groups and the difference in satisfaction was statistically significant at p = 0.004.

There was a significant association between age group with cleanliness service satisfaction. The satisfaction of availability of cleanliness varied among age-groups. The satisfaction was higher among older age-groups than younger age-groups and the difference of the satisfaction was statistically significant at p value = 0.003. Statistical significant difference was found among cleanliness of toilet satisfaction levels in terms age-groups (p = 0.045) and income of respondents (p = 0.004). It was found older age-group's satisfaction level (82.00%) was higher than younger age-group (62.50%). Respondents with lower income had higher proportion of satisfaction (73.00%), while higher income had higher proportion of low satisfaction (80.00%).

There was the statistically significant association between easy to find one place to another place related to required service satisfaction and gender of participants, their incomes and financial supports.

Regarding gender, it was indicated that the female (70.03%) had a higher proportion of satisfaction than the male (54.87%). The p-value found was 0.005 showed a statistical association between sex and easy to find place satisfaction.

Respondents with lower income had higher proportion of satisfaction (70.99%), while higher income had higher proportion of low satisfaction (61.54%). It was indicated that higher income of respondents had a lower proportion of low satisfaction than lower income. There was a strong association between the number of visiting with easy to find place satisfaction at significance p value = 0.011.

In context with the number of visits, it was found from the results that group having a higher proportion of satisfaction (58.12%) belonged to those who had visited at the first time. The group of respondents having visited more than two times had the highest proportion of satisfaction (82.09%). It was indicated that patients visited at the first time group had a lower proportion of satisfaction than patients visited more than two times. There was a strong association between the number of visiting with easy to find place satisfaction at significance p value = 0.001.

Concerning the financial support of the respondents, the results determined that patients who used personal finance (62.58%) and support by NSSF (61.88%) had a higher proportion of satisfaction, while in a group of patients who used finance support by equity fund/NGO/others, 82.09% had high satisfaction. It was indicated that group of patients who used finance support by equity fund/NGO/others had a higher proportion of satisfaction than a group of patients supported by NSSF. The p-value found was 0.000 showing a strong statistical association between financial supports which means it was easy to find place satisfaction.

Hospital information,

As described in table 9, an association of socio-demographic characteristic with satisfaction, there was a significant association between marital statuses with working hour satisfaction. It was found the group of single 60% and married 76.68% had satisfaction, while

in a group of windowed/separate, 82.35% had high satisfaction. The satisfaction was higher among windowed/separate groups than the single and the married and the difference of the satisfaction was statistically significant at p value = 0.015.

Characteristics	N	Enough Seat			Cleanliness			Cleanliness of toilet			Easy to find place that you have to go		
		Unsatisfied	Satisfied	P-value	Unsatisfied	Satisfied	P-value	Unsatisfied	Satisfied	P-value	Unsatisfied	Satisfied	P-value
		%	%		%	%		%	%		%	%	
Sex				0.840			1.000			0.137			0.005
Female	287	8.01	91.99		10.10	89.90		28.47	71.53		29.97	70.03	
Male	113	8.85	91.15		9.73	90.27		40.00	60.00		45.13	54.87	
Age				0.000			0.003			0.045			0.105
18 - 30	111	18.92	81.08		6.31	93.69		37.50	62.50		41.44	58.56	
31 - 50	214	4.67	95.33		14.49	85.51		35.96	64.04		33.18	66.82	
51 - 65	75	2.67	97.33		2.67	97.33		18.00	82.00		26.67	73.33	
Marital status				0.040			0.795			0.823			0.373
Single	70	15.71	84.29		8.57	91.43		34.48	65.52		41.43	58.57	
Married	313	7.03	92.97		10.22	89.78		31.93	68.07		32.59	67.41	
Windowed / Separate	17	0.00	100.00		11.76	88.24		22.22	77.78		35.29	64.71	
Income per month				0.004			0.367			0.004			0.011
< = 600,000 Riel	162	4.32	95.68		11.11	88.89		27.00	73.00		29.01	70.99	
600,001 – 140,000,0 Riel	213	9.43	90.57		8.49	91.51		31.91	68.09		34.91	65.09	
More than 140,000,0 Riel	25	23.08	76.92		15.38	84.62		80.00	20.00		61.54	38.46	
Number of visit				0.170			0.626			0.571			0.001
First time	191	5.76	94.24		11.52	88.48		31.82	68.18		41.88	58.12	
2 - 3 time	142	9.86	90.14		9.15	90.85		35.82	64.18		31.69	68.31	
More than 3 time	67	11.94	88.06		7.46	92.54		26.53	73.47		17.91	82.09	
Finance support				0.159			0.125			0.523			0.000
Personal finance	163	6.75	93.25		12.88	87.12		34.52	65.48		37.42	62.58	
NSSF	181	11.05	88.95		9.39	90.61		32.56	67.44		38.12	61.88	
Government/ Equity fund/ NGO / Other	56	3.57	96.43		3.57	96.43		23.53	76.47		12.50	87.50	
For this analysis purpose, will be dichotomized the variable into low= 1-3 and high= 4-5 categories													

Table 8: *Factor association between socio-demography characteristics and Physical facilities Satisfaction In univariate analysis.*

There was the significant association between the numbers of visit with satisfaction of board information on regulation, time patient visit, working hour, information from other staff when they need. The satisfaction was lower among respondents visited at the first time groups (59.69%), (66.49%) and (80.63%) than respondents visited more than two times group (72.54%), (80.99%) and (92.96%) and the difference of the satisfaction was statistically significant at p value = 0.044, P = 0.005 and 0.004.

Single		Marital status			Number of visit		
		Married	Windowed / Separate	First time	2 - 3 times	More than 3 times	
N		70	313	17	191	142	67
Board information on regulation, time patient visit	P-value	0.872			0.044		
	% Satisfied	68.57	65.18	64.71	59.69	72.54	68.66
	% Unsatisfied	31.43	34.82	35.29	40.31	27.46	31.34
Working hour	P-value	0.015			0.005		
	% Satisfied	60.00	76.68	82.35	66.49	80.99	80.60
	% Unsatisfied	40.00	23.32	17.65	33.51	19.01	19.40
Information from other staff when need	P-value	0.778			0.004		
	% Satisfied	84.29	86.26	82.35	80.63	92.96	85.07
	% Unsatisfied	15.71	13.74	17.65	19.37	7.04	14.93
For this analysis purpose, will be dichotomized the variable into low = 1-3 and high = 4-5 categories.							

Table 9: *Factor association between socio-demography characteristics and hospital information satisfaction in univariate analysis.*

Waiting time: As also given in table 10, there was the significant association between financial supports with waiting at registration's satisfaction. The satisfaction of waiting at registration varied among finance support groups. The satisfaction was higher among respondents who used personal finance groups (82.82%) than equity fund/NGO and NSSF group (58.93%) and the difference of the satisfaction was statistically significant at p value = 0.001.

There was the statistically significant association between waiting at payment service satisfaction and their age, educational status, occupational of respondents, income of respondents, residence of respondents and their financial supports. The result showed that older age-group 31 - 50 years 75.23% were more likely to have high satisfied with waiting at payment service, while age-group 18 - 30 years 60.36% and 51 - 56 years 70.67% had higher proportion of satisfaction. It was indicated that age-group 31 - 50 years had higher proportion of satisfaction than younger age and older age-group, statistically significant association at p value = 0.021. Illiterate group having the highest proportion of satisfaction (84.09%) belonged to those who had no education. The group of respondents having an education level of primary (74.10%) and secondary and higher (64.98%) had satisfaction at p-value = 0.018. The patients who were company staffs/NGOs' staffs/others had a lower proportion of satisfaction (59.38%), statistically significant at p value = 0.022. It was found out from the results that the higher income group had an equal proportion of satisfaction (50%) and lower income, those income groups < = 150$, had the highest proportion of satisfaction (73.46%). It was confirmed the association of income per month with waiting at payment service satisfaction at p value = 0.043. The group of patients who live in Phnom Penh (63.82%) had lower proportion satisfaction than patients who come from provinces (74.19%) at p-value = 0.032.

The patients supported by equity fund/NGO/other had an equal proportion of satisfaction (50%), while group of patients who used personal finance had higher proportion of satisfaction (79.14%). It was indicated that patients who used personal finance had higher satisfaction than patients supported by equity fund/NGO/other, statistically significant at p value = 0.000.

Characteristics	N	Waiting at Registration			Waiting at payment service		
		Unsatisfied	Satisfied	P-value	Unsatisfied	Satisfied	P-value
		%	%		%	%	
Age				0.485			0.021
18 - 30	111	29.73	70.27		39.64	60.36	
31 - 50	214	23.83	76.17		24.77	75.23	
51 - 65	75	28.00	72.00		29.33	70.67	
Education				0.192			0.018
Illiterate	44	20.45	79.55		15.91	84.09	
Primary	139	22.30	77.70		25.90	74.10	
Secondary/ higher	217	29.95	70.05		35.02	64.98	
Occupation				0.068			0.022
Unemployed / students	49	20.41	79.59		28.57	71.43	
Farmer / Self-employed	124	19.35	80.65		20.16	79.84	
Worker	195	30.77	69.23		34.36	65.64	
Company staff / NGOs 'staff/Other	32	34.38	65.62		40.62	59.38	
Income per month				0.900			0.043
< = 600,000 Riel	162	25.31	74.69		26.54	73.46	
600,001 - 140,000,0 Riel	213	27.36	72.64		29.72	70.28	
More than 140,000,0	25	23.08	76.92		50.00	50.00	
Address				0.162			0.032
Phnom Penh city	152	30.26	69.74		36.18	63.82	
Province	248	23.79	76.21		25.81	74.19	
Finance support				0.001			0.000
Personal finance	163	17.18	82.82		20.86	79.14	
NSSF	181	29.83	70.17		31.49	68.51	
Government/Equity fund/NGO/ Other	56	41.07	58.93		50.00	50.00	
For this analysis purpose, will be dichotomized the variable into low= 1-3 and high= 4-5 categories							

Table 10: *Factor association between socio-demography characteristics and waiting time satisfaction in univariate analysis.*

Courtesy

As showed in table 11, there was the significant association between age-groups, occupation, income per month and financial supports with friendly at cashier staff's satisfaction. The satisfaction was higher among older age-groups (92.00%) than younger age-group (75.68%) and the difference of the satisfaction was statistically significant at p value=0.009. Farmers and self-employment respondents had higher proportion of satisfaction (94.35%) than company staffs/NGOs' staff/others respondents (75.00%) and the difference of the satisfaction was statistically significant at p value=0.000. It found out from the results that patients who had income group 150.01 - 350$ (77.83%) had lower satisfaction than lower income (91.36%). There was confirmed the association of income per month with friendly at cashier staff's satisfaction at p value = 0.001. Concerning of financial supports, the result showed that respondents supported by government/equity fund/NGO/Others (73.21%) had lower satisfaction than respondents who used personal finance (93.25%) at p-value = 0.000.

As also given in table 11, there was the statistically significant association between the income group with communication at registering staff satisfaction. The patients who had high income group (84.62%) had lower satisfaction than lower income (99.38%), statistically significant at p value = 0.002.

Satisfaction with communication at cashiers staff was found to have a significant association with the occupational of respondents (p = 0.000), income of respondents (p = 0.004) and financial support of respondents (p = 0.000). The satisfaction of communication at cashiers staff was varied among occupational of respondents. Unemployed/ students respondents had higher proportion of satisfaction (9592%) than worker (82.56%). The patients who had income group 150.01 - 350$ (85.38%) had lower satisfaction than higher income (96.15%). The result showed that respondents supported by government/ equity fund/NGO/Others (76.79%) had lower satisfaction than respondents who used personal finance (98.77%).

Statistical significant difference was found among communication of nurse satisfaction levels in terms income of respondent (p = 0.010). The patients who had high income group (76.92%) had lower satisfaction than lower income (95.06%).

There was statistically significant association between communication at doctors' satisfaction and income of respondents had high satisfaction at p value = 0.015.

There was the significant association between age-group and income per month with communication at pharmacy staffs' satisfaction. Older-group perceived higher satisfaction (100%) in comparison to younger age-group (94.59) (p = 0.009). The group high and low income perceived higher satisfaction (100%) in comparison to group of patient who had income 150.01-350$ (96.70) (p = 0.041).

18 - 30		Age			Occupation				Income per month			Finance support		
		31 - 50	51 - 65	Unemployed/ students	Farmer/ Self-employed	Worker	Company staff/ NGOs'staff/ Other	< = 150$	150.01 - 350 $	More than 350$	Personal finance	NSSF	Government /Equity fund /NGO/Other	
	N	111	214	75	49	124	195	32	162	213	25	163	181	56
Friendly at cashier staff	P-value	0.009			0.000				0.001			0.000		
	% Satisfied	75.68	85.51	92.00	91.84	94.35	76.92	75.00	91.36	77.83	88.46	93.25	79.01	73.21
	% Unsatisfied	24.32	14.49	8.00	8.16	5.65	23.08	25.00	8.64	22.17	11.54	6.75	20.99	26.79
Communication at registers staff	P-value	0.070			0.543				0.002					0.679
	% Satisfied	98.20	94.86	100.00	97.96	95.97	97.44	93.75	99.38	96.23	84.62	95.71	97.24	98.21
	% Unsatisfied	1.80	5.14	0.00	2.04	4.03	2.56	6.25	0.62	3.77	25.38	4.29	2.76	1.79
Communication at cashiers staff	P-value			0.085	0.000				0.004			0.000		
	% Satisfied	84.68	90.19	94.67	95.92	98.39	82.56	87.50	93.83	85.38	96.15	98.77	85.08	76.79
	% Unsatisfied	15.32	9.81	5.33	4.08	1.61	17.44	12.50	6.17	14.62	3.85	1.23	14.92	23.21
Communication at nurses	P-value	0.335			0.959				0.010			0.513		
	% Satisfied	90.09	92.52	96.00	91.84	93.55	91.79	93.75	95.06	92.45	76.92	91.41	92.27	96.43
	% Unsatisfied	9.91	7.48	4.00	8.16	6.45	8.21	6.25	4.94	7.55	23.08	8.59	7.73	3.57
Communication at doctors	P-value	0.098			0.424				0.015			0.402		
	% Satisfied	95.50	94.39	100.00	97.96	97.58	94.36	93.75	98.77	92.92	100.00	96.93	95.58	92.86
	% Unsatisfied	4.50	5.61	0.00	2.04	2.42	5.64	6.25	1.23	7.08	0.00	3.07	4.42	7.14
Communication at pharmacy staff	P-value	0.009			0.111				0.041			0.128		
	% Satisfied	94.59	99.53	100.00	100.00	100.00	100.00	96.92	100.00	96.70	100.00	99.39	96.69	100.00
	% Unsatisfied	5.41	0.47	0.00	0.00	0.00	0.00	3.08	0.00	3.30	0.00	0.61	3.31	0.00

Table 11: *Factor association between socio-demography characteristics and Courtesy satisfaction in univariate analysis.*

Quality of care: As showed in table 12: There was statistically significant association between doctors spending enough time with patients' satisfaction and age and residence of the respondents. The result found that older age-groups had a higher proportion of satisfaction (97.33%) than younger age-group 87.39%) and the difference of the satisfaction was statistically significant at p value = 0.002. Group of respondents who come from province had higher proportion of satisfaction (98.18%) than who live in Phnom Penh (89.47%) and the difference of the satisfaction was statistically significant at p value = 0.002.

The satisfaction of doctors telling you about your illness/prognosis/time required for treatments varied among age-groups. The satisfaction was higher among older age-groups than younger age-group and the difference of the satisfaction was statistically significant at p value = 0.003.

Satisfaction with doctors clearly explaining the procedures and medication was found to have a significant association with the occupational of respondents. The satisfaction was higher among farmers and self-employment (97.58%) than unemployed/students (87.76%) and the difference of the satisfaction was statistically significant at p value = 0.037.

There was statistically significant association between doctors treatment and number of visit of the respondents. It was seen respondents applied to this hospital before was more satisfied (89.44%) than respondents applied this hospital for the first time (79.58%), statistical significant relationship was found at p value = 0.047.

Satisfaction with nurses showing respect was found to have a significant association with the occupational of respondents and residence of respondents. The satisfaction of nurses' respect was varied among occupation. The satisfaction was higher among farmers and self-employment (96.77%) than company staff/NGOs' staff/others (81.25%) and the difference of the satisfaction was statistically significant at p value=0.028. Group of respondents who come from province had higher proportion of satisfaction (95.56%) than who live in Phnom Penh (90.13%) and the difference of the satisfaction was statistically significant at p value = 0.038.

There was the significant association between occupations with nurses' skillful satisfaction. The satisfaction was higher among farmers and self-employment (92.74%) than company staff/NGOs' staff/others (71.88%) and the difference of the satisfaction was statistically significant at p value=0.021.

There was statistically significant association between financial supports with received enough drugs satisfaction (p = 0.004). Group of respondents supported by NSSF (85.64%); equity fund/NGO/others (85.71%) were higher satisfied than respondents used personal finance (71.78%).

There was statistically significant association between age group and financial supports with returning to this hospital next time satisfaction. Older age-groups (93.33%) had higher proportion of satisfaction than younger age-group (77.48%) and the difference of the satisfaction was statistically significant at p value=0.004. Respondents who supported by NSSF had a high proportion of satisfaction (81.77%), while the group of respondents supported by equity fund/NGO/others had higher proportion of satisfaction (96.43%), statistically significant at p value = 0.011.

Satisfaction with recommends this hospital to others was found a significant association with the residence of respondents, number visits of the respondents and financial support of respondents. Group of respondents who come from province had higher proportion of satisfaction (9395%) than who live in Phnom Penh (86.84%), statistically significant at p value = 0.018. The group of respondents having visited 2-3 times had the higher proportion of satisfaction (96.48%) than who use at the first time (87.43%), statistically significant at p value = 0.011. Respondents who supported by NSSF had a high proportion of satisfaction (87.85%), while the group of respondents supported by equity fund/NGO/others had higher proportion of satisfaction (100%) and the difference of the satisfaction was statistically significant at p value = 0.007.

Table 12: Factor association between socio-demography characteristics and Quality of care with doctor and nurse satisfaction in univariate analysis		Age			Occupation				Address		Number of visit			Finance support		
		18 - 30	31 - 50	51 - 65	Unemployed / students	Farmer / Self-employed	Worker	Company staff / NGOs'staff / Other	Phnom Penh city	Province	First time	2 - 3 time	More than 3 time	Personal finance	NSSF	Government / Equity fund / NGO/Other
N		111	214	74	49	124	195	32	152	248		142	67	163	181	56
Doctor Spend enough time with you	P-value			**0.002**				0.176		**0.002**			0.423			0.803
	% Satisfied	87.39	96.73	97.33	87.76	94.35	95.90	93.75	89.47	97.18	95.29	94.37	91.04	93.25	95.03	94.64
	% Unsatisfied	12.61	3.27	2.67	12.24	5.65	4.10	6.25	10.53	2.82	4.71	5.63	8.96	6.75	4.97	5.36
Doctor Tell you about you illness / prognosis/time required for treatments	P-value			**0.003**				0.111		0.843			0.780			0.549
	% Satisfied	88.29	92.99	100.00	87.76	96.77	92.31	90.62	93.42	92.74	92.15	94.37	92.54	93.25	91.71	96.43
	% Unsatisfied	11.71	7.01	0.00	12.24	3.23	7.69	9.38	6.58	7.26	7.85	5.63	7.46	6.75	8.29	3.57
Doctor Clearly explained procedures and medications	P-value			0.108				**0.037**		0.552			0.685			0.084
	% Satisfied	88.29	93.93	96.00	87.76	97.58	90.77	93.75	94.08	91.94	92.15	92.25	95.52	95.71	91.71	87.50
	% Unsatisfied	88.29	93.93	96.00	12.24	2.42	9.23	6.25	5.92	8.06	7.85	7.75	4.48	4.29	8.29	12.50
Doctor Treatment	P-value			0.822				0.856		0.574			**0.047**			0.186
	% Satisfied	83.78	83.64	86.67	81.63	86.29	83.59	84.38	82.89	85.08	79.58	89.44	86.57	80.98	85.08	91.07
	% Unsatisfied	16.22	16.36	13.33	18.37	13.71	16.41	15.62	17.11	14.92	20.42	10.56	13.43	19.02	14.92	8.93
Nurse show respect	P-value			0.560				**0.028**		**0.038**			0.369			0.524
	% Satisfied	91.89	93.46	96.00	93.88	96.77	93.33	81.25	90.13	95.56	93.72	91.55	97.01	95.09	92.27	92.86
	% Unsatisfied	8.11	6.54	4.00	6.12	3.23	6.67	18.75	9.87	4.44	6.28	8.45	2.99	4.91	7.73	7.14
Nurse skillful	P-value			0.809				**0.021**		0.625			0.532			0.952
	% Satisfied	87.39	88.79	90.67	89.80	92.74	88.72	71.88	87.50	89.52	86.91	90.85	89.55	88.96	88.95	87.50
	% Unsatisfied	12.61	11.21	9.33	10.20	7.26	11.28	28.12	12.50	10.48	13.09	9.15	10.45	11.04	11.05	12.50
Receive enough drug Satisfaction	P-value			0.463				0.200		0.440			0.645			**0.004**
	% Satisfied	79.28	78.50	85.33	83.67	73.39	82.56	84.38	82.24	78.63	81.15	77.46	82.09	71.78	85.64	85.71
	% Unsatisfied	20.72	21.50	14.67	16.33	26.61	17.44	15.62	17.76	21.37	18.85	22.54	17.91	28.22	14.36	14.29
Return to this hospital next time Satisfaction	P-value			**0.004**				0.165		0.881			0.404			**0.011**
	% Satisfied	77.48	88.79	93.33	85.71	91.94	83.59	84.38	86.18	86.69	84.29	89.44	86.57	88.34	81.77	96.43
	% Unsatisfied	22.52	11.21	6.67	14.29	8.06	16.41	15.62	13.82	13.31	15.71	10.56	13.43	11.66	18.23	3.57
Satisfaction to Reccomend hospital to other	P-value			0.641				0.242		**0.018**			**0.011**			**0.007**
	% Satisfied	89.19	91.59	93.33	91.84	95.16	88.72	90.62	86.84	93.95	87.43	96.48	91.04	92.02	87.85	100.00
	% Unsatisfied	10.81	8.41	6.67	8.16	4.84	11.28	9.38	13.16	6.05	12.57	3.52	8.96	7.98	12.15	0.00
For this analysis purpose, will be dichotomized the variable into low= 1-3 and high= 4-5 categories																

Table 12: *Factor association between socio-demography characteristics and Quality of care with doctor and nurse satisfaction in univariate analysis.*

Discussion

Patients' satisfaction is regarded as one of the quality indicators of healthcare services. It is also necessary for patients and healthcare professionals to establish a strong, consistent relationship. The study's findings revealed that participants were pleased with the service outpatient's department at KSFH. However, satisfaction was lower for toilet cleanliness, ease of finding a place, hospital information, wait time at register and payments, wait time at laboratory and drug availability.

According to a study conducted by JIMMA University specialty hospital, the major causes of dissatisfaction were found to be poor cleanliness, poor information provision, long waiting times and a lack of drugs [18].

This current finding was higher than the study in Banphaneo autonomous hospital, Samut Sakhon province, where some findings were lower, such as waiting time for outpatient appointments and waiting time for prescribed drugs from the pharmacy, communication with registration staffs, nurses' communication skill, pharmacists' communication skill, friendliness of doctor and friendliness of pharmacy staffs. On the other hand, the current findings were also higher in terms of quality of care, as doctors performed examinations with respect, doctors spent enough time performing examinations and nurses listened to their problems [9].

In terms of toilet cleanliness, the current study found that 68% of participants who used it were satisfied. The findings revealed that older patients were more likely than younger patients to be satisfied with the cleanliness of their toilets. This could imply that younger people demanded a higher level of cleanliness.

Patients with higher incomes reported the lowest level of satisfaction. This implied that wealthy patients appear to accept a higher level of cleanliness. The physical environment of the hospital plays an important role in improving service quality as well as creating an appealing outpatient environment, cleanliness of toilets, which is regarded as one of the most important reasons for patients coming to the hospital, particularly young patients and high-income patients. According to the Fraihi Khalid J Al., *et al*. study, the higher the income, the higher the expectation of cleanliness. In terms of gender and education, female and university graduate patients have higher cleanliness expectations [15].

When compared to studies in a surgical unit of a tertiary care teaching hospital in Pakistan [44] and a country hospital in Jilin province, China [23] this study's findings had higher satisfaction.

In terms of the service consultation environment, married patients were more satisfied, whereas employed patients and people living in cities were less satisfied and employed individuals were less satisfied with the care environment [23].

The ease of finding one location to another in relation to the required service is also regarded as a major factor that may influence patient satisfaction. This finding revealed a lower rate of satisfaction (65.75%). Female patients were more likely than male patients to be satisfied with the ease of finding one place to another related to required service. This could imply that male patients appear to have passive attitudes toward seeking the required location with female hospital staff.

Patients with higher incomes were more likely to be dissatisfied. This could imply that the group of elite patients had a higher demand for easy accessibility.

Patients who visited the hospital for the first time had the lowest level of satisfaction. This could imply that the hospital should provide clear information or direction as to where they need to go and they should be properly guided to another location related to required services.

Patients who received NSSF assistance had the lowest proportion of satisfaction with the ease of locating required services from one location to another. It is possible that the service for patients is being undermined, with less proper guidance and information provided.

Although the level of satisfaction with the ease of finding one place to another related to required services was low, it indicated that this finding had no bearing on overall satisfaction because, during data collection, the hospital was repairing and modifying hospital facilities, as well as information counter, registration and payment place for general patients, as well as NSSF, equity fund and poor card to be closed. There have also been placed far apart temporarily until new facilities adjacent to repair, particularly for patients supported by the NSSF and equity fund place were far apart from one another.

In terms of hospital information: When patients arrive at the hospital, they are bombarded with an overwhelming amount of information, so it is critical that navigational information is conveyed in a patient-friendly, easily navigable format. A study in North York General Hospital in Canada found that unclear signage and directions to guide patients were effective strategies for improving patient satisfaction [45]. The current study discovered a high rate of satisfaction level in terms of getting information from other staff when needed (84.50%), whereas a study in Kedah, Malaysia discovered that only 51.3% of information given by staff was helpful and useful to the patient [13].

This discovery revealed a lower rate of satisfaction in terms of information counter and direction flow (72.25% and 60.25%, respectively). According to a JIMMA University study, 61% of patients who visited the hospital were satisfied with the information provided [18]. When compared to an Indian study that found 95 - 100% of patients satisfied with the information counter, the current finding was lower [46].

In terms of waiting time, the length of actual waiting time is an important factor to consider in order to improve overall satisfaction ratings. This study discovered that 73% of participants were satisfied with the waiting time at registration, 70% with the waiting time at the payment boot and 72% with the waiting time at the laboratory. A study in Karnataka, India discovered a higher rate (91%) of satisfaction with registration time [46], while a study at Kathmandu University in Kathmandu, Nepal discovered 52% of patients satisfied with registration waiting time and 57.7% satisfied with billing system [30]. Nonetheless, findings from a Turkish Military Hospital revealed that satisfaction rates at the registration and laboratory were approximately 63% and 60%, respectively [47].

Patients who used personal finance were more likely to be satisfied with their registration and payment wait times than those who used NSSF or equity funds. This could imply that the processing of patients who used the NSSF and equity funds takes longer and requires more documentation.

According to the findings, older patients were more likely than younger patients to be satisfied with their wait time at the payment service. This could imply that those people required a shorter wait time and a faster process.

Patients with a high education, a higher income group, a Phnom Penh city address and company/NGO staff had the lowest proportion of satisfaction with payment service wait time. This could imply that those patients needed a quick process and a short wait time, as well as punctuality and a waiting number.

Individuals aged 15 - 44 years and male patients were less likely to be satisfied with waiting time, those who were married were more satisfied with waiting time, but employed individuals were much more likely to be satisfied with waiting time, according to a study in Jilin Province, China [23]. Patients with a secondary education were more likely to be satisfied with the waiting time at the laboratory service than patients with a lower education [48].

Patients were dissatisfied with the unnecessarily long wait times at the registration and payment services. These services should be quick and easy to obtain. We determined that the long wait was caused by long patient lines with no waiting number, as well as a lack of staff at the registration counter and payment service. A known contributor to long wait times in hospital outpatient clinics and public health clinics is a lack of staffing [25].

The strongest correlation between high levels of satisfaction and staff friendliness and satisfactory communication with their patients [17]. In this current study, it was discovered that respondents were highly satisfied with communication at pharmacy staff, registration staff and cashier's staff, with satisfaction rates of 98.25%, 96.75% and 89.5%, respectively and friendly at registration and cashier's staff, with 92.25% and 84%, respectively.

The findings revealed that female patients and patients with lower incomes were more likely than male and higher income patients to be satisfied with communication with register staff. Younger patients, patients who work for a company or an NGO, patients with incomes ranging from 600,001 to 1,400,000 Riel and patients who used an equity fund or an NGO fund had the lowest proportion of satisfaction with friendly and communicative cashier staff. This could imply that those patients expected a courteous response from everyone involved in providing care.

This is consistent with the findings of Patavegar Bilkish N1, who discovered that in Sassoon General Hospital in Maharashtra, 94% of patients were satisfied with the friendliness and helpfulness of registration staff [3]. This finding was high when compared to a previous study in this hospital, statement about welcome attitudes and respect shown by registration staff, where less than half of the respondents, 47.5%, showed high satisfaction and 91.5% were highly satisfied with respectful manner and cooperation by pharmacy staff [11].

Consumer trust was jeopardized due to health providers' poor communication skills. A study at Mwananyamala Hospital's OPD discovered poor quality care, a lack of communication skills among staff, politeness and insufficient listening by OPD personnel [34].

According to a Chinese study, satisfaction was associated with poor attitudes of health workers, patients aged 15 - 44 years and employed patients were less likely to be satisfied and insured patients were more likely to be satisfied with providers listening to patients and health workers' attitudes [23]. Good communication and friendliness between patients and healthcare providers, as well as a good doctor-patient relationship, would aid in the rapid identification of problems, which would improve patient satisfaction in this hospital.

Consultation time was also regarded as one of the most important factors that could influence patient outcomes [37]. A consultation time has significant positive or negative effects on the health-care system. When consultation time is cut too short, patients become dissatisfied because their conditions are not adequately addressed. The level of satisfaction with doctor time spent with patient was high (94.25%), according to our findings. The findings revealed that older patients, widowed or separated patients and single patients were more likely to be satisfied with doctors spending enough time on patient satisfaction than younger patients and single patients. This could imply that younger and single people needed more time with the doctor.

Patients with higher incomes were less satisfied with their doctor spending enough time. This suggests that those patients are more demanding of their clinicians and, as a result, have higher expectations for consultation time.

This level of satisfaction was higher when compared to a study conducted in Kedah Malaysia, which found that only 40% of participants agreed that doctors had spent enough time on consultation sessions [13], whereas University Kebangasaan Malaysia Medical Centre found that time spent by doctors on consultation sessions was adequate [49].

According to Mulago Hospital research, patients who live more than 20 kilometers away from the hospital and are unemployed are more satisfied [32]. A study in Malaysia discovered that male patients over the age of 50 had lower income and patients with a high school education had significantly higher service satisfaction [10]. Males and wealthier patients were found to be more satisfied with their doctor visits. In contrast to other studies conducted in the Gjilan region, Kosovo was negatively associated with age and was significantly higher among urban residents, those with a high level of education and those who were employed [50].

The low rate of satisfaction was discovered to be due to a lack of drugs and supplies. According to this finding, 80% of respondents were satisfied with the amount of drugs they received. Patients who used personal finance were less satisfied than patients who used NSSF or equity fund/NGO/others. This meant that patients who used personal finance had high hopes of receiving enough drugs from the hospital.

In contrast to this study, a study of client satisfaction with health service delivery at Jimma university specialized hospital discovered that only 23.5% of clients were dissatisfied with the lack of drugs and supplies in hospital pharmacies. Illiterate patients, patients from urban areas, patients who receive free payment and patients on their first visit were more satisfied with available drugs [18].

Return to hospital was related to the quality of care and our study found a high level of satisfaction (86.5%). The findings revealed that older patients were more likely than younger patients to be satisfied with returning to this hospital in the future. This could imply that younger people needed more assurance in medical care, treatments and better services.

Patients supported by the NSSF have a lower proportion of high satisfaction with hospital readmission. This could imply that the hospital had a poor hospital environment, rude medical staff, a lack of punctuality at the registration desk, doctors who didn't check medical exams and did whatever they wanted and a lack of drugs.

This study's findings show higher satisfaction with return to this hospital when compared to studies conducted at Sassoon General Hospital in Maharashtra and A Military Hospital in Turkey, where satisfaction rates were 52% and 78.1%, respectively. There was a statistically significant difference in satisfaction levels among outpatients based on age group, with the oldest age group having the highest satisfaction level [3,47].

Recommending the hospital to others was another important factor that reflected patients' satisfaction with hospital services as well as the quality of treatment when they received good service and they will introduce this hospital to their relatives or friends to get service from this hospital. According to our findings, 91.25% of respondents are satisfied enough to recommend this hospital to others. According to the findings of this study, patients who live in Phnom Penh and are visiting the hospital for the first time have a lower proportion of high satisfaction. This implies that those patients had high expectations for good hospital services, treatment quality and hospital information.

Patients who used NSSF reported lower levels of satisfaction. This could imply that the hospital provided poor service to this patient due to complex documents required to process the fund and not being completed on time, or that this patient expected better service from another public or private hospital.

In comparison to a study done at Ayub Teaching Hospital in Pakistan and Sassoon General Hospital in Maharashtra, where approximately 71.2 percent and 62.91 percent were considered recommending this hospital to others [3,12]. The study of Outpatient Satisfaction in A Military Hospital, Turkey discovered lower satisfaction in recommending the hospital to others (78.5%) and the same result in terms of participants who had previously applied to this hospital being more satisfied than participants who had never applied to this hospital [47].

Study Limitation

a. The satisfaction of patients who attended general outpatient but not all patients from all units of OPD, so it may not represent the overall hospital satisfaction.

b. Khmer Soviet Friendship Hospital was purposefully chosen for the study.

c. Some data collectors were replaced during data collection due to their availability. As a result of their background and understanding of this study, there may be bias in obtaining data from the hospital's patient perception between these data collections. This could be avoided if these data collectors were rigorously trained before they began collecting data.

Conclusion

The study of patient satisfaction is an effective method of evaluating hospital performance from the perspective of the patients. The information obtained in this type of study is valuable in removing discrepancies that are distorting patient satisfaction in order to make this hospital and Outpatient Department in Khmer Soviet Friendship Hospital more appealing to patients. This study had a high overall level of patient satisfaction at OPD service, such as room for consultation, seats for waiting, getting information from hospital staff when needed, medical expense, waiting at pharmacy, friendly doctors, communication pharmacy staff and clear prescription by pharmacist.

However, in terms of toilet cleanliness, ease of finding one place to another related to required services, information counter, flow of direction, waiting time at register and payments desks, friendly and communication of laboratory staff and lack of drugs, there was a lower rate of satisfaction.

There was a statistically significant difference in participant satisfaction levels that varied by age group, education, occupation, income, residence, number of visits and financial support. There were findings that older age groups, illiterate, unemployed, low income, residence in province, visits more than three times and used personal finance had a higher proportion of satisfaction than younger age groups, high educated, high income, worker, company or NGO staff, residence in city, first visiting and patient who used NSSF.

Recommendation

Based on the findings of this study, hospital facilities on cleanliness and odorless bathroom in the vicinity of the hospital should be improved by equipping with adequate bathroom materials, appropriate cleaning toilets and training cleaners about infection control. In 24 hours, the information counter should be given precise information in a polite and positive manner. The ability to move from one location to another should be improved by establishing an appropriate hospital flow direction and assigning a job as a hospital guide without delay.

Waiting time at registration and payment services must be reduced by providing a waiting number (numbering system) for new arrivals to take a number and wait in each service, as well as increasing the number of registration and payment staff to accommodate the number of patients presented.

The laboratory service should establish guidelines for the dissemination of laboratory results and promote staff courtesy. The hospital should keep more high-quality drugs on hand in the pharmacy for consumption and sale.

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