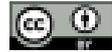


## Original Research



## Patient satisfaction of services at the out-patient department of Base Hospital Panadura, Sri Lanka

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DOI: <https://doi.org/10.4038/jccpsl.v23i2.8105>

Received on: 14 May 2017

Accepted on: 28 June 2017

### Abstract

**Background:** Patient satisfaction is one of the well-known yardsticks to measure the strength of services being provided in hospitals.

**Objective:** To assess the level of satisfaction on health care services provided by the out-patient department (OPD) and associated socio-demographic factors among patients attending a base hospital in Sri Lanka.

**Methods:** A cross-sectional study was conducted among 422 out-patients at Base Hospital (BH) Panadura, selected using a systematic sampling method during January 2017. Critically ill patients and first timers to the OPD were excluded. Data were collected using a self-administered questionnaire on the personal characteristics of patients and their satisfaction with OPD services under five domains: physical facilities, registration, consultation, pharmacy and accessibility of services. Satisfaction was assessed based on a pre-determined scoring system. Patients were dichotomized into two groups: 'satisfied' and 'less-satisfied' with the OPD services, and were compared by selected socio-demographic factors using chi-square test.

**Results:** Response rate was 85% (n=359). The majority consisted of females (n=261, 72.7%). Patient satisfaction varied according to the service domain: physical facilities (n=214, 59.6%), registration (n=138, 38.4%), consultation (n=175, 48.7%), pharmacy services (n=198, 55.1%) and accessibility of service (n=118, 32.9%). Further, only smaller proportions of patients were satisfied with the adequacy (n=119, 33.1%) and comfort (n=160, 44.6%) of seating facilities; adequacy (n=130, 36.2%) and cleanliness (n=109, 30.4%) of toilets; waiting time at the dispensary (n=65, 18.1%) and for consultation (n=120, 33.4%), and examination done by doctor (n=131, 36.5%). Females were significantly less-satisfied with the overall OPD services compared to males (25% versus 18.4%; p=0.04). No such relationship was seen in relation to age (p=0.28) and level of education (p=0.31).

**Conclusions:** Most patients were satisfied with the overall OPD services. Yet, areas such as registration services, waiting time especially for dispensary and consultation, and sanitary and seating facilities need further improvement. Strengthening the infrastructure and introducing an appointment system are recommended.

**Key words:** patient satisfaction, hospital service, quality of care

## Introduction

Satisfaction means a feeling of fulfilment. Patient satisfaction is one of the benchmarks by which the quality of health care services is evaluated (1). It is a subjective assessment against one's own expectations, thus providing crucial information on the mismatch of expectations and quality of care received by each individual (2).

It is shown that a higher level of patient satisfaction could enhance the compliance of patients to treatment, which could lead to positive outcomes of the disease itself (2). Recently, there has been greater weight put on the patient contribution to treatment decisions, along with patient sovereignty upheld as one of the basic values and causal evidence for the success of delivering health care services (3). Therefore, measuring the quality of health care services received by patients has become an integral component of any health care system, which serves as an effective indicator to evaluate the success of service delivery in a hospital (4). Though it is challenging to the prevailing administration of a hospital, evaluation of the patient satisfaction is essential to identify any shortcomings in the service provision that need to be addressed promptly, and thereby help health planners to take more pragmatic action towards improvement (5).

Compared to similar developing countries, Sri Lanka has a remarkable record of health care provision. Availability of free health care system in the government sector and accessibility to a health centre within 1.3 km radius from any residence are great privileges enjoyed by every Sri Lankan (6). The high literacy rate, free healthcare services and improved road networks can be identified as the main contributory factors for preventing the delays due to poor availability and accessibility to health service delivery in Sri Lanka (7). Sri Lanka has made extensive advances in its economic status, educational status, urbanization and peoples' expectations, which in turn have resulted in greater demand for quality health care. In meeting this demand, the gaps in current service delivery should be identified first for initiating evidence-based health system reforms in future (8).

Out-patient department (OPD) is the first contact point of a patient in a hospital. In Sri Lanka, some of the hospitals provide an electronic-based data recording system of the patients who seek medication at OPD. Before the consultation, every patient should be registered at the reception and provided an identification number, which is displayed on a screen outside the consultation room and the dispensary area. This will help

to reduce the feeling of discomfort to patients, leading to improved satisfaction with services delivered. Moreover, it facilitates the management of a patient, and ordering of investigations and treatment to be quicker (9).

Panadura is a large and densely populated town in the district of Kalutara. In 2012, its total population was 182,285 (10). Base Hospital (BH) Panadura is located in Panadura town. Approximately 1200 patients seek OPD services daily in this hospital. It introduced an electronic-based hospital health information management system (HHIMS) on 8th August 2014. Though a study has been done recently in BH Panadura to explore the patient and staff satisfaction towards the HHIMS, it did not cover the patient satisfaction related to other services in the OPD (11). Although patient management is predominantly taking place in the OPD, studies done in this setting on patient satisfaction with services are few in number (12). Thus, the objective of this study was to assess the level of satisfaction of OPD services and its associated socio-demographic factors among the out-patients at BH Panadura. Findings of this study will help to identify the bottlenecks in the functioning system, and thereby improve the service delivery, decision making on patient management and basic facilities available at the OPD.

## Methods

This was a cross-sectional study conducted among patients over 18 years of age attending the OPD of BH Panadura. Patients who were visiting the OPD for the first time, who have been diagnosed of psychiatric illnesses and those needing emergency treatment were excluded from the study. The required sample size was calculated as 422 to detect an estimated proportion of high satisfaction with services received of 50%; Z value of 1.96; precision of 5%; and non-response of 10% (13). Using a systematic sampling technique, eligible patients giving informed written consent were recruited for the study, while awaiting their turn for consultation. An attempt was made to collect data with minimal disturbance to them. The completed questionnaires were collected at the exit point of hospital visit.

Data were collected using a pretested self-administered questionnaire, which consisted of two sections: personal characteristics of the participants and their satisfaction with the OPD services received during their current visit. OPD services were assessed in relation to five domains: physical facility, services on registration, consultation services, pharmacy services and accessi-

bility of the services. The questionnaire was designed after a detailed literature survey that considered studies conducted in developed as well as developing countries. It was subsequently reviewed by a panel of experts consisting of consultant community physicians and medical administrators.

Data analysis was carried out using Statistical Package for Social Sciences (SPSS) software version 20. Responses obtained for each question on their satisfaction with the OPD services were scored on a Likert scale ranging from 1-5. Higher scores indicated a higher level of satisfaction with the service provided. According to the score obtained for each question, patients were divided into three categories: 'agree as satisfactory' (scores of 4 or 5), 'neutral' (score of 3) and 'disagree as satisfactory' (scores of 1 or 2). Thereafter, mean scores were calculated for individual questions and

for each domain of OPD services. Domain scores above the mean (>3.0) were categorized as 'satisfied' and scores equal or below the mean categorized as 'less-satisfied'. The two groups were compared for selected socio-demographic factors using chi-square test.

## Results

The study was carried out among 359 patients, giving a response rate of 85% (359/ 422). The mean age of respondents was 43 years (SD=6.9). The majority consisted of females (n=261, 72.7%) and belonged to 41-60 year age group (n=181, 50.4%) and Sinhalese ethnicity (n=321, 89.4%). Most were married (n=206, 57.4%), had passed G.C.E (Ordinary level) examination (n=153, 42.6%) and drew a monthly income of Rs. 10,001-25,000 (n=162, 45.1%). More than half of the respondents (n=201, 56%) were unemployed (Table 1).

**Table 1. Socio-demographic characteristics of the OPD patients**

Socio-demographic factors	Male n=98 (%)	Female n=261 (%)	Total n=359 (%)
<b>Age (years)</b>			
18- 40	33 (33.7)	115 (44.1)	148 (41.2)
41-60	45 (45.9)	136 (52.1)	181 (50.4)
> 61	20 (20.4)	10 (3.8)	30 (8.4)
<b>Ethnicity</b>			
Sinhalese	87 (88.8)	234 (89.7)	321 (89.4)
Tamil	5 (5.1)	8 (3.1)	13 (3.6)
Muslim	2 (2.1)	17 (6.4)	19 (5.3)
Other	4 (4.0)	2 (0.8)	6 (1.7)
<b>Current marital status</b>			
Unmarried	34 (34.7)	68 (26.1)	102 (28.4)
Married	56 (57.1)	150 (57.4)	206 (57.4)
Widowed/ Separated	8 (8.2)	43 (16.5)	51 (14.2)
<b>Highest educational level</b>			
Primary	10 (10.2)	34 (13.0)	44 (12.3)
Secondary	46 (46.9)	26 (10)	72 (20.0)
Passed G.C.E (O/L) examination	24 (24.5)	129 (49.4)	153(42.6)
Passed G.C.E. (A/L) or equivalent	18 (18.4)	72 (27.6)	90 (25.1)
<b>Current employment status</b>			
Unemployed	25 (25.5)	176 (67.5)	201 (56)
Self-employed	43 (43.9)	10 (3.8)	53 (14.8)
Other employment	30 (30.6)	75 (28.7)	105 (29.2)
<b>Monthly income</b>			
Less than Rs. 10,001	11 (11.2)	56 (21.4)	67 (18.7)
Rs. 10,001 - 25,000	43 (43.8)	119 (45.6)	162 (45.1)
Rs. 25,001 - 40,000	40 (40.9)	72 (27.6)	112 (31.2)
More than Rs. 40,000	4 (4.1)	14 (5.4)	18 (5.0)

Table 2 describes the experience on health care services received by patients at the OPD under five domains. More than half of the patients agreed that the OPD could be easily located (n=227, 63.2%) and was clean (n=182, 50.7%). However, only a smaller proportion agreed that the seating facilities were adequate (n=119, 33.1%) and that the seating was comfortable (n=160, 44.6%). Although 130 participants (36.2%) agreed that there were enough toilets in the waiting area, 109 participants (30.4%) claimed that they were not clean.

With regards to registration services, 153 participants (42.6%) agreed that the registration staff was cooperative. With regard to pharmacy services, more than half (n=190, 52.9%) of the respondents agreed that the pharmacist explained the use of medicines clearly, while almost a similar proportion (n=206, 57.4%) of patients were satisfied with the availability of medicines at the OPD.

Consultation services consisted of seven items. The majority agreed that the doctor obtained a detailed history of their illness (n=197, 54.9%) and listened carefully to

what they said and understood their concerns (n=194, 54%). However, only 131 (36.5%) claimed that the doctor did a relevant examination. With regard to accessibility to services, the proportion of patients satisfied with the waiting time for registration was 45.1% (n=162); to consult a doctor was 33.4% (n=120); and in the dispensary was 18.1% (n=65).

As shown in Table 3, the majority of patients were satisfied with the physical facilities (n=214, 59.6%) and pharmacy services (n=198, 55.1%). However, more than 60% of the patients were less-satisfied with registration services (n=221, 61.6%) and accessibility in terms of waiting time for consultation and pharmacy (n=241, 67.1%).

Associations of the overall satisfaction related to services received by patients with their age, sex and level of education are shown in Table 4. There was no significant difference in the overall satisfaction in relation to age (p=0.28) and level of education (p=0.31), but there was a significant difference with gender (p=0.03).

**Table 2. Socio-demographic characteristics of the OPD patients**

Health care service	Agree		Neutral		Disagree		Mean (SD)
	No.	%	No.	%	No.	%	
<b>Physical facilities</b>							
• Is easy to locate the OPD	227	63.2	94	26.2	38	10.6	3.75 (1.005)
• OPD is clean	182	50.8	101	28.1	76	21.2	3.45 (1.192)
• Seating facilities in the waiting area are adequate	119	33.1	125	34.8	115	32.0	2.94 (1.051)
• Seating facilities in the waiting area are comfortable	85	23.7	114	31.8	160	44.6	2.77 (1.123)
• Toilets available in the waiting area are adequate	130	36.2	102	28.4	127	35.4	2.99 (1.161)
• Toilets in the waiting area are clean	122	34.0	128	35.7	109	30.4	2.84 (1.131)
• Drinking water facilities in the OPD area are adequate	165	46.0	104	29.0	90	25.1	3.26 (1.137)
• Registration number which is announced can be clearly heard	211	58.8	67	18.7	81	22.6	3.45 (1.241)
• Patient number is clearly displayed on the screen outside the consultation room	186	51.8	62	17.3	111	23.9	3.31 (1.191)
• Patient number is clearly displayed on the screen outside the dispensary room	153	42.6	75	20.9	131	36.5	3.03 (1.353)

(Continued)

Health care service	Agree		Neutral		Disagree		Mean (SD)
	No.	%	No.	%	No.	%	
<b>Registration services</b>							
• Staff warmly welcomed me	153	42.6	90	25.1	116	32.3	3.14 (1.315)
• The staff was punctual	133	37.0	107	29.8	119	33.1	3.01 (1.323)
<b>Pharmacy services</b>							
• Pharmacy staff explained how to use medicines	190	52.9	105	29.2	64	17.8	3.47 (1.150)
• Medicines were available at the OPD	206	57.4	110	30.6	43	12.0	3.56 (1.052)
<b>Consultation services</b>							
• Doctor asked for a detailed history of my illness	197	54.9	94	26.2	68	18.9	3.54 (1.204)
• Doctor provided details about my treatment	182	50.7	96	26.7	81	22.6	3.40 (1.275)
• I was given enough time to discuss with the doctor	194	54.0	103	28.7	62	17.3	3.55 (1.183)
• Doctor took enough time to examine me	131	36.5	116	32.3	112	31.2	3.12 (1.280)
• Doctor was punctual	157	43.7	68	18.9	134	37.3	3.08 (1.286)
• Doctor spent enough time to enter details in the computer	162	45.1	94	26.2	103	28.7	3.24 (1.542)
• Privacy was maintained	141	39.3	176	32.3	102	28.4	3.20 (1.232)
<b>Accessibility of services</b>							
• Waiting time to registration was satisfactory	162	45.1	115	32	82	22.6	3.22 (1.264)
• Waiting time to consult a doctor was satisfactory	120	33.4	103	28.7	136	37.9	2.74 (1.266)
• Waiting time in the dispensary was satisfactory	65	18.1	113	31.5	181	50.4	2.42 (1.183)

**Table 3. Level of patient satisfaction with overall domains of OPD services**

Facility/services	Satisfied	Less satisfied
	No. (%)	No. (%)
Physical facilities	214 (59.6)	145 (40.4)
Registration services	138 (38.4)	221 (61.6)
Consultation services	175 (48.7)	184 (51.3)
Pharmacy service	198 (55.1)	161 (44.9)
Accessibility of services	118 (32.9)	241 (67.1)

**Table 4. Relationship of the level of OPD patient satisfaction with selected socio-demographic characteristics**

Characteristic	Satisfied		Less satisfied		Significance
	No.	%	No.	%	
<b>Age</b>					$\chi^2=2.5$
< 40 years	86	58.1	62	41.9	df=1
≥ 41 years	98	46.4	113	53.6	p=0.28
<b>Sex</b>					$\chi^2=0.33$
Male	80	81.6	18	18.4	df=1
Female	196	75.0	65	25.0	<b>p=0.04</b>
<b>Highest educational level</b>					$\chi^2=2.33$
Up to G.C.E (O/L)	195	72.5	74	27.5	df=1
Beyond G.C.E. (O/L)	43	47.8	47	52.2	p=0.31

## Discussion

Patient satisfaction is an important tool to measure the quality of care provided to the patient. In this study, patient satisfaction was assessed in relation to OPD services under five domains as well as individual aspects within each domain. Most of the patients showed satisfaction based on their experience related to physical facilities, pharmacy services and consultation services in the OPD while it was poor for registration and waiting time particularly for obtaining medicine and consultation. Despite having an efficient e-health record system in BH Panadura, patient satisfaction being less owing to long waiting time at the doctor and dispensary is noteworthy.

In comparison with similar studies conducted in other developing countries, a study conducted among 200 patients attending the OPD in Jaiprakash Hospital in Bhopal, India revealed that most of the patients were satisfied with the availability of good seating facilities (n=156, 78%), drinking water (n=136, 68%) and toilet facilities (n=140, 70%). 76% (n=152) respondents also agreed on the doctor's service (14). Another study on patient satisfaction with OPD services in Khmer-Soviet Friendship Hospital, Phnom Penh city, Cambodia reported that as much as 96.5% (n=193) of the patients were satisfied with regard to the cleanliness of OPD premises (5). In the current study, though patients were

satisfied with the easy location of OPD and availability of drinking water, they were less satisfied with the availability of enough seating and toilet facilities. This discrepancy could be due to the high expectations of Sri Lankans towards such facilities, since most of their households in both urban and rural areas are equipped with better housing, sanitation and less over-crowding, unlike in some of the developing countries.

A research done at the OPD in Banphaeo Community Hospital in Samut Sakhon Province, Thailand summarized satisfaction of patients on the physical facilities, consultations and registration services provided in the OPD in contrast to poor satisfaction observed in pharmacy services (15). Another study done at the OPD in Jaiprakash Hospital in Bhopal, India revealed that 80% (n=160) of patients were satisfied with the services delivered at the reception area (14). In contrast, less satisfaction of patients was seen with regards to registration services in the current study, possibly due to the overcrowding of the registration area. This is a common occurrence in any base hospital due to the high turn-over of OPD patients per day and the inadequacy of staff at the registration desk.

Hospital administrators providing services are accountable for conveying the good image of hospital. Therefore, the level of patient satisfaction on the services is an indicator to identify the specific areas that need

further improvement. The present study revealed poor satisfaction with the waiting time for consultation and pharmacy service. Waiting time has been an important indicator in a study, which was conducted in BH Homa-gama (16). It had also been one of the key performance indicators of patient satisfaction in the survey conducted in Banphaeo Community Hospital in Samut Sakhon Province, Thailand (15). Therefore, if action could be taken to reduce the time spent by patients in waiting areas, the patient satisfaction could improve drastically. The greater time taken for waiting area before consultation can be improved by introducing separate queues for old and new patients, since new patients need more time for history and examination. Appropriate distribution of patients among doctors is also recommended. Further, introducing an appointment system for the patient is beneficial. In this appointment system, patients are given appointments according to time schedules within different intervals. It would also prevent interruption of the patient's daily routine and working agenda.

### Conclusions and Recommendations

In general, most of the OPD patients were satisfied based on their experience related to physical facilities, pharmacy and consultation services in the OPD. In contrast, it was poor for registration services and waiting time utilised specifically for dispensary. Also, specific facilities such as toilets and seating needed further improvement. Authorities need to address the issue of waiting time by introducing an appointment system. Strengthening the infrastructure and empowering patients to be responsive towards the cleanliness of hospital is also recommended.

#### Public health implications

Patient satisfaction is one of the main outcome measures to identify the quality of hospital health care. Findings of this study will provide evidence to formulate national strategies and policies for improving the quality of services in base hospitals.

### Author Declarations

**Competing interests:** The authors declare that they have no competing interests.

**Ethics approval and consent to participate:** Ethics clearance was granted by the Ethics Review Committee of the Faculty of Medicine, University of Colombo. Written authorization was obtained from the Medical Superintendent, BH Panadura. Informed written consent was taken from the selected patients.

**Funding:** Authors acknowledge the financial assistance granted by the Ministry of Health, Sri Lanka.

**Acknowledgments:** Authors thank the Medical Superintendent, staff and patients at the OPD in BH Panadura who contributed to the study.

**Author contribution:** KK was the principal investigator of the study. All authors were involved in conceptualising and designing the study, and acquisition of data. KK carried out the statistical analysis, drafted the manuscript and made revision. All authors finalized the paper.

### References

1. Nabbuye-Sekandi J, Makumbi FE, Kasangaki A, Kizza IB, Tugumisirize J, Nshimye E, Peters DH. Patient satisfaction with services in outpatient clinics at Mulago Hospital, Uganda. *International Journal for Quality in Health Care* 2011; 23(5): 516-523.
2. Ganasegeran K, Perianayagam W, Abdul Manaf R, Ali Jadoo SA, Al-Dubai SAR. Patient Satisfaction in Malaysia's Busiest Outpatient Medical Care. *The Scientific World Journal* 2015.
3. Joosten EAG, DeFuentes-Merillas L, De Weert GH, Sensky T, Van Der Staak CPF, De Jong CA, Systematic review of the effects of shared decision-making on patient satisfaction, treatment adherence and health status. *Psychotherapy and Psychosomatics* 2008; 77(4): 219-226.
4. Mohd A, Chakravarty A. Patient satisfaction with services of the outpatient department. *Medical Journal Armed Forces India* 2014; 70(3): 237-242.
5. Vadhana M. *Assessment of patient satisfaction in an outpatient department of an autonomous hospital in Phnom Penh, Cambodia*. Doctoral dissertation. Japan: Ritsumeikan Asia Pacific University, 2012. Available from: <http://r-cube.ritsumei.ac.jp/bitstream/10367/4729/1/51210624.pdf>.
6. Family Care International Organization. *Skilled care during childbirth: country profile*. 2002. Available from: [http://www.familycareintl.org/UserFiles/File/Skilled%20Care%20Info%20Kit%20PDFs/English/Country%20Profiles\\_English.pdf](http://www.familycareintl.org/UserFiles/File/Skilled%20Care%20Info%20Kit%20PDFs/English/Country%20Profiles_English.pdf).

7. Medical Statistic Unit. *Annual Health Bulletin* 2012, Sri Lanka. Colombo: Ministry of Health & Indigenous Medicine, 2013.
8. Thresia CU, Mohindra KS. Public health challenges in Kerala and Sri Lanka. *Economic and Political Weekly* 2011; 30: 99-107.
9. Kulathilaka S. “eHospital-Dompe” project – the story of the transformation of a district hospital in Sri Lanka. *Sri Lanka Journal of Bio-Medical Informatics* 2013; 4(2).
10. DCS. *Census of Population and Housing 2011*. Colombo: Department of Census and Statistics, 2012.
11. Ranasinghe GSP, Samarage S, Samaraweera P, Chaminda A. *Improvement of outpatient services in a base hospital through an interoperable information system: a case study*. 22nd Scientific Sessions of the College of Medical Administrators of Sri Lanka, 2015.  
Available from: [http://www.cmasl.org/pdf/Abstract\\_2015.pdf](http://www.cmasl.org/pdf/Abstract_2015.pdf).
12. Qadri SS, Pathak R, Singh M, Ahluwalia SK, Saini S, Garg PK. An assessment of patient satisfaction with services obtained from a tertiary care hospital in rural Haryana. *International Journal of Collaborative Research on Internal Medicine & Public Health* 2012; 4(8):1524-1537.
13. Lwanga SK, Lemeshow S. *Sample size determination in health studies: a practical manual*. Geneva: World Health Organization, 1991.
14. Joshi S, Joshi MK. A study on patient satisfaction in outpatient department of secondary care hospital of Bhopal. *International Journal of Community Medicine and Public Health* 2017; 4(4): 1141-1147.
15. Mandokhail AK, Keiwkarnka B, Ramasoota P. *Patient satisfaction towards outpatient department (OPD) services of medicine in Banphaeo Autonomous Hospital Samut Sakhon Province, Thailand Bangkok*. Thailand, Mahidol University. 2007.
16. Koggalage PD, Samarage S, Sandanayake AP, Ranasinghe GSP, Marantota C. *Patient satisfaction with services provided by service providers at the out-patient department in Base Hospital, Homagama*. 24th Annual Academic Sessions of the College of Medical Administrators of Sri Lanka, 2016.  
Available from: [http://www.cmasl.lk/images/ss\\_2016\\_abstract\\_book.pdf](http://www.cmasl.lk/images/ss_2016_abstract_book.pdf).