

# Patients' satisfaction and associated factors among private wing patients at Bahirdar Felege Hiwot Referral Hospital, North West Ethiopia

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**Abstract:** Background: Patient satisfaction has become well established as an important consideration in health care provision and an integral component of measuring quality health service. However, health care outcomes still have been defined by professionals and have largely reflected a clinical perspective, particularly in low income countries including Ethiopia. This study aimed to assess patients' satisfaction and associated factors among adult private wing patients at Bahirdar Felege Hiwot Referral Hospital, Amhara National Regional State, North West Ethiopia. Methods: Institutional based quantitative cross sectional study was conducted from March 12 to April 30, 2014 on 384 service users using systematic random sampling technique. Data were collected by using "structured interviewer administered questionnaire", entered using EPI INFO version 3.5.3, and analyzed by SPSS for windows version 20.0. Variables having  $p < 0.2$  at bi-variable analysis were fitted to multi variable analysis, OR, P-value and 95% CI were computed to show the association of variables. Result: From the total sample size ( $n = 422$ ), three hundred eighty four patients were interviewed, of which 70.3% were outpatients. The results of the study showed that overall patient satisfaction with the health services rendered at the private wing of the hospital was 57.8% at 95% CI (52.8%-63.1%) computed from satisfaction measuring items. Among measuring items, satisfaction was reported to be highest (93.2%) to the cleanliness of the rooms, and least for availability of signs and directions to ease the way in the private wing (25%) to the scale satisfied. Being outpatient reduces satisfaction by 59% as compared with inpatients (AOR: 0.411(0.243-0.696). Conclusion and recommendation: Overall private wing patient satisfaction (57.8%) at 95% CI (52.8%-63.1%) is lower as compared with recent studies in public hospitals of Ethiopia. Age, occupation and patient department are significantly associated with patient satisfaction. The hospital need to strengthen efforts to deliver integrated quality services to improve patient satisfaction at the private wing.

**Keywords:** Private Wing, Hospital, Outpatients, Inpatients, Satisfaction

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## 1. Introduction

Measuring patients' satisfaction has become an integral part of hospital management strategies for quality assurance and accreditation process in most countries, distinguishing that lack of sufficient data can severely inhibit an organization's ability to understand its strengths and to target areas in which performance can be improved(1, 2)

Measuring patient satisfaction is a way of assessing the process of care, describing the patient's viewpoint, and evaluating care by reflecting patient views back into the

system and through comparing facilities (3). It is also the best source of information about a health care systems' communication, education and pain management process that has enhanced patient-centered high quality care(4, 5). Studies indicated that a satisfied patient has complied with the medical treatment prescribed, provider recommendation delivered, and continually using medical services at a specific health provider, which might resulted with, enhanced disease healing process, healthier and happier clients, whom contributing to the development of the country (6-9).

Studies conducted in different public hospitals in Ethiopia

come up with overall client satisfaction ranging from 22.0% in Gondar to 77% in Jimma (1, 6, 10-14). Different Studies reported that: patient provider relationship (courtesy, listening, consultations, etc), medical care and information, physical environment, lack of adequate transportation, in-patient services, hospital facilities and access to care, waiting time and cost of treatment, visiting of Doctors after registration, inadequate physical examination by providers, laboratory procedures, re-visiting of the doctor for evaluation with laboratory results, prescription paper for drugs and supplies, availability of prescribed drugs/medications from the hospitals' pharmacies, difficulty to locate different sections, cleanliness of toilets/bathrooms, availability of drinking water etc. were the frequently faced problems affecting satisfaction(1, 2, 5, 6, 9-16).

Health care outcomes still have been defined by professionals and have largely reflected a clinical perspective, particularly in low income countries like Ethiopia, which is well differ from that of clients' outlook, considered as a difficult concept to be measured and interpreted; also considerably ignored by health care managers, which contradicted with suggestions of the emerging health care literatures towards patient views for the success of facilities(2, 3, 17). No studies has been published on private wing patients' satisfaction and associated factors under public hospitals (18), as well as, it is new initiative with rapid progress of scaling up country wide in Ethiopia, i.e. four hospitals in 2010, eighteen hospitals in 211, thirty one hospitals in 212 has launched it, and more hospitals, work to inaugurate it(19, 20).

Therefore, this study assessed private wing patient satisfaction and associated factors at Bahirdar Felege Hiwot Referral Hospital, to support providers of care by modifying their provision of services to make their patients more satisfied.

## 2. Methods

The study was conducted from March 12 to April 30, 2014 to assess private wing patients' satisfaction and identify associated factors at Bahirdar Felege Hiwot Referral Hospital, Bahirdar Town, Amhara National Regional State, 563 kilometers from Addis Ababa (capital city of Ethiopia), North West, that deliver inpatient and outpatient Medical services for the community whom has had afford full cost recovery for the services since April 2011.

Institutional based cross-sectional study design was conducted. The study includes both adult ( $\geq 18$  years) inpatients and outpatients enrolled at the private wing of Bahirdar Felege Hiwot Referral Hospital excluding seriously ill patients in the study period.

The sample size was determined by single population proportion formula with the following assumptions; proportion of the population had taken as 50% to get maximum sample size, since the private wing patients satisfaction at public hospitals was not known, at 95% confidence level and margin of error 5%, considering 10%

non-response rate the sample size was 422.

The sample was obtained by allocating patients proportionally to private wing adult inpatients and outpatients and the study samples were taken from each department under study by systematic random sampling.

The dependent variable were private wing patient satisfaction, likewise the independent variables included were Socio demographic factors (Age, Sex, Marital status, Educational level, Occupation, Residence, Frequency of visit, Patient department); Enabling Factors (Cost of treatment, Income, Pre information, Convenience)

Healthcare facility factors: Communication& relationships (Courtesy & respect, Privacy, Information), Diagnosis & Medication- (Waiting time, BP/Thermometer/Waiting scale, Drugs), Physical environment- (Sign & direction indicators, Toilets/ bathroom, Drinking water), Convenience- (Services, Cost, time)

The operational definitions of some words or phrases are stated as follows:

Private wing: An annex, or an extension within a hospital where medical services are provided to patients at full-cost recovery (that is, no subsidies).

Patient Satisfaction: Perception of the outcome of care and the extent it meets patients need and expectation

Inpatients: Patients who had a hospital stay  $>1$  day

Outpatients: Received care at the health facility on a day the survey was conducted

Patient department: Service area serving either outpatients, or inpatients

Waiting time: The interval between departures from registration for outpatient service & seen by a doctor i.e.at waiting station of the private wing.

Satisfied: In this study refers participants who have the overall satisfaction of median score equal and above 44 on the given items to measure satisfaction.

Recent Studies: In this survey refers studies done in public hospitals of Ethiopia since 2010.

Consumer Assessment of Healthcare Providers and Systems (CAHPS) questionnaire was chosen as a tool to assess patient satisfaction in low-income countries(2).

It was modified for use and translated into Amharic (the predominant local language in Amhara National Regional State) by two Ethiopian language teachers (1 Amharic &1 English) and back-translated to check the consistency of the translation and then pre-tested with 20 (5% of sample size) patients with the same set up, but out of study area to identify questions that were unclear or confusing. Based on the pre-test data, the survey items were slightly modified and final questionnaire were developed for fielding.

The CAHPS tool is a multiple item scale to measure patient satisfaction covered four domains of care: Communications and relationship, Diagnosis and medications, Physical environment, and Convenience. Items were scored using a 4-point Likert scale, ranging from (1 = very dissatisfied) to (4 = very satisfied)(2).

Waiting time after registration to see the doctor was asked only to outpatients, and length of admission days were asked

only to inpatients. The survey also includes whether they would recommend this private wing to friends and family (Yes / No), and there was a question asking to rate personal satisfaction to services in the private wing (Satisfied / Dissatisfied).

Data were collected by pre-tested 'interviewer administered questionnaire', entered using EPI INFO version 3.5.3, exported and analyzed using SPSS for windows version 20, by checking missing values, computing calculable variables & recoding.

Summary statistics of socio demographic variables were presented using frequency tables and graphs. Bi variable analysis was done and variables with p-value less than 0.2 were included in the multiple logistic regression analysis. Odds ratio and 95% confidence intervals were also computed along with the corresponding p-value.

The study was reviewed and approved by Institutional Research Review Board of Institute of Public Health, University of Gondar, and Approval was got from Bahirdar Felege Hiwot Referral Hospital Chief executive. The purpose and the importance of the study were explained, verbal and written consent was obtained from each participant.

### 3. Results

#### 3.1. Socio Demographic Characteristics of Participant

Among the total sample size (n = 422) three hundred eighty four adult patients' were interviewed, giving a response rate of 91%, of which 270(70.3%) were outpatients.

There was comparable gender distribution with slight male predominance 196 (51%) and 123 (32%) of the respondents were between the age group of 28-37 years. The mean age of respondents was  $36.12 \pm (SD) (10.973)$  years.

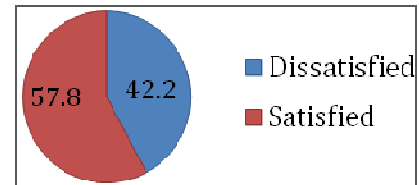
Pertaining to occupation of respondents 121 (31.5%) were merchants. Furthermore, (90.6%) of respondents were new visitors, and 62.8% had no pre-information about the private wing (Table 1).

#### 3.2. Respondents Score on Satisfaction Measuring Items

Among the total respondents (n = 384), 93.2% were responded as "satisfied" to cleanliness of service delivery rooms, whereas 70.8% as "dissatisfied" to availability of sign and direction indicators to ease the way in the hospital (Table 2).

#### 3.3. Determining Patient Satisfaction

Overall satisfaction was 57.8% at 95% CI (52.8%-63.1%) computed from satisfaction measuring items (Figure 1).



**Fig. 1.** Diagrammatic presentation of private wing patient satisfaction in BFHRH, 2014

**Table 1.** Baseline characteristics of respondents at BFHRH, 2014(n=384)

Items	Number	Percent
<b>Patient Department</b>		
Inpatient	114	29.7
Outpatient	270	70.3
<b>Sex</b>		
Male	196	51.0
Female	188	49.0
<b>Age</b>		
18-27	109	28.4
28-37	123	32.0
38-47	82	21.4
48+	70	18.2
<b>Occupation</b>		
Farmer	98	25.5
Merchant	121	31.5
Government employee	59	15.4
Private employee	31	8.1
Others@	75	19.5
<b>Family income</b>		
<1200	98	25.5
1200-2250	98	25.5
2251-2968.50	92	24.0
>2968.50	96	25.0
<b>Marital Status</b>		
Not married	104	27.1
Married	247	64.3
Divorced	22	5.7
Widowed	11	2.9
<b>Residence</b>		
Rural	152	39.6
Urban	232	60.4
<b>Educational Level</b>		
Unable to read and write	53	13.8
Can read and write	63	16.4
Grade 1-6	63	16.4
Grade 7-12	71	18.5
Certificate and above	134	34.9
<b>Frequency of visit</b>		
New	348	90.6
Repeat	36	9.4
<b>Pre-information</b>		
No	241	62.8
Yes	143	37.2

@ = Student, House wife, No occupation

**Table 2.** Satisfaction of patients with the different components of health care services, Private wing BFHRH, 2014 (n=384)

Items	Very dissatisfied n(%)	Dissatisfied n(%)	Satisfied	Very Satisfied n(%)
<b>Communication and relationship items</b>				
1. Courtesy and respect	0(0)	49(12.8)	324(84.4%)	11(2.9)
2. Doctors listen carefully	0(0)	70(18.2)	306(79.7)	8(2.1)
3. Doctors nurses explain things in understandable way	0(0)	95(24.7)	280(72.9)	9(2.3)
4. Get enough privacy	0(0)	100(26.0)	279(72.7)	5(1.3)
5. Get enough time to discuss problems	0(0)	158(41.1)	225(58.6)	1(0.3%)
6. Information regarding to symptoms lookout	0(0)	215(56.0)	169(44.0)	0(0)
<b>Diagnosis and Medication items</b>				
7. Satisfied with waiting time to be seen by a Doctor after registration	0(0)	56(14.6)	326(84.9)	2(0.5%)
8. Doctor/ nurse use BP/ thermometer/ waiting for diagnosis	0(0)	43(11.2)	340(88.5)	1(0.3)
9. Laboratory result were described	3(0.8)	101(26.3)	279(72.7)	1(0.3)
10. Doctor/ nurse told what the medication was for	2(0.5)	52(13.5)	326(84.9)	4(1.0)
11. Doctor/nurse/ describe side effects of the drug	3(0.8)	217(56.5)	157(40.9)	7(1.8)
12. Availability of prescribed drugs	0(0)	89(23.2)	294(76.6)	1(0.3)
13. Pain well controlled	2(0.5)	162(42.2)	211(54.9)	9(2.3)
<b>Physical environment items</b>				
14. Clean service delivery rooms	0(0)	19(4.9)	358(93.2)	7(1.8)
15. Quite atmosphere	1(0.3)	61(15.9)	317(82.6)	5(1.3)
16. Drinking water has been availability	0(0)	252(65.6)	129(33.6)	3(0.8)
17. Clean toilets bathrooms	0(0)	239(62.2)	141(36.7)	4(1.0)
18. Sign & direction indicators were available to ease ways	11(2.9)	272(70.8)	96(25.0)	5(1.3)
<b>Convenience items</b>				
19. Satisfied with overall waiting time to get whole services	0(0)	76(19.8)	308(80.2)	0(0)
20. All services needed were available in the facility	0(0)	176(45.8)	208(54.2)	0(0)
21. Cost for treatment were affordable	2(0.5)	195(50.8)	185(48.2)	2(0.5)

### 3.4. Bivariable and Multi Variable Analysis

Among the baseline variables fitted to binary regression model for bi-variable analysis: patient department, age, occupation, marital status, and educational level were significantly associated with patient satisfaction at alpha 5% ( $p < 0.2$ ).

Finally the covariates: patient department (age and occupation were found significant at alpha 5% ( $p < 0.05$ ) with patient satisfaction (Table 3).

## 4. Discussion

This study showed that overall satisfaction of private wing patients with services obtained from the private wing at Bahirdar Felege Hiwot Referral Hospital was (57.8%) with (95%CI (52.8%-63.1%), which is lower as contrasting with foreign studies done at public hospitals(9, 16, 21). These variations may be due to the socio-cultural and economic status of the patients' in the particular areas of respective countries. Besides, the source of difference may also be methodological variation.

In contrasting with studies in Ethiopia: the overall satisfaction of this study is greater as compared with some public hospitals satisfaction studies(12, 13) The variations might be due to better services in the private wing as a result

of patients' opportunity to choose their health personnel, particularly doctors; may also due to methodological variations. On the contrary it was lesser as compared with recent studies at public hospitals in Ethiopia (1, 2). The difference particularly in a study at JUTRH might be because of presence of many qualified health personnel, delivery of wide services, and availability of better instruments and equipments, since it is teaching referral hospital. There may be also higher expectations of patients on private wing services at Bahirdar Felege Hiwot Referral Hospital.

When we come to satisfaction scores of measuring items, high proportion of respondents in this study replied 'satisfied' for most factors (Table 2) as compared with studies(1, 6, 9, 11, 16). The disparity may be due to real existence of satisfactory situations related to measuring factors in the private wing of BFHRH due to its specialty. On the other hand some crucial factors got lower satisfaction score to the scale 'satisfied' in this study. To mention some, presence of sign and direction indicators to ease the way in the hospital (25%), availability of drinking water (33.6%), describing side effects of drugs (40.9%), and information regarding to symptoms look out after leaving the hospital (44%). Therefore, maximize efforts towards them without compromising the other services is essential job to do so for betterment of private wing patient.

In our study among base line variables, age, occupation, and patient department, are significantly associated with patients' satisfaction ( $p < 0.05$ ). Similarly age, and occupation were reported significantly associated with patient satisfaction in studies SHURH, as well as JUTRH, age is also significant with satisfaction in a study at Addis Ababa hospitals. However unlike our study educational status and frequency of visit are significantly associated in a study at JUTRH ( $p < 0.05$ ) (1, 6, 11, 14). This distinction may

be due to confounding effect, etc. Therefore doing researches with maximum sample size, and including variables as many as enough to control confounding effect, etc. is better to get true associations.

Pertaining to patient department, being outpatient reduce satisfaction by 59 % as compared with inpatients (AOR 0.411 (95% CI (0.243-0.696)), which may be due to getting information about services, observe delivering services, know the reality and practicing it over the lengths of time.

**Table 3.** Bi-variable and multi-variable analysis showing factors affecting patient satisfaction, BFHRH, 2014 ( $n=384$ )

Variables	Satisfied (n=222) n (%)	Dissatisfied (n=162) n (%)	COR(95% CI)	AOR(95% CI)
<b>Patient department</b>				
Inpatient	77(67.5)	37(32.5)	1	1
Outpatient	145(53.7)	125(46.3)	.557(.352-.882)*	.411(.243-.696)**
<b>Age</b>				
18-27	80(73.4)	29(26.6)	1	1
28-37	80(65.0)	43(35.0)	.674(.384-1.185)	1.158(.583-2.300)
38-47	36(43.9)	46(56.1)	.284(.154-.522)***	.466(.221-.981)*
$\geq 48$	26(37.1)	44(62.9)	.214(.112-.408)***	.395(.178-.877)*
<b>Occupation-</b>				
Farmer	55(56.1)	43(43.9)	1	1
Merchant	54(44.6)	67(55.4)	.630(.369-1.077)	.514(.249-1.065)
Government employee	31(52.5)	28(47.5)	.866(.453-1.655)	.728(.332-1.598)
Private employee	19(61.3)	12(38.7)	1.238(.542-2.826)	.937(.345-2.543)
Others@	63(84.0)	12(16.0)	4.105(1.968-8.560)	2.907(1.085-7.790)*
<b>Marital status-</b>				
Single	72(69.2)	32(30.8)	1	1
Married	134(54.3)	113(45.7)	.527(.324-.857)*	
Divorced	12(54.5)	10(45.5)	.533(.209-1.361)	
Widowed	4(36.4)	7(63.6)	.254(.069-.929)*	

@=house wife, student, no occupation

\*\*\* $P < 0.005$

\*  $P < 0.01$

\* $p < 0.05$

Being aged within 37- 47 years (AOR 0.466 (95% CI (0.221-0.981)), and 48+ years (AOR 0.395 (95% CI (0.178-0.877))) have decreased satisfaction by 53% and 60% respectively as compared with ages within 18 - 27 years. It may be due to an increment of expectations as well as the enhanced knowledge and experience as age gets higher.

Overall, to improve the satisfaction of patients, strengthening efforts to deliver integrated quality service is suggested. Particularly extending it to areas of sign and direction indicators to ease the way, drinking water, description of side effects of drugs, and information regarding to symptoms look out after leaving the hospital. Periodic patient satisfaction survey may also be institutionalized to provide feedback for continuous quality improvement.

This study had some limitations; first, the study used a descriptive cross-sectional design that cannot establish trends and causality between potential predictors and patient satisfaction. Second interview held on admitted patients might be inflated the result due to social desirability bias.

## 5. Conclusion

Overall private wing patient satisfaction (57.8%) at 95% CI (52.8%-63.1%) computed from the different components

of health care delivered at the private wing of the hospital is lower as compared with recent studies in public hospitals of Ethiopia.

High proportion of patients were dissatisfied with patient satisfaction measuring items, such as, availability of sign and direction indicators to ease the way in the hospital, availability of drinking water, description of side effects of drugs, and information regarding to symptoms look out after leaving the hospital.

Among the baseline characteristics patient department, age, and occupation were significantly associated with patient satisfaction ( $p < 0.05$ ).

This survey on private wing patient satisfaction may be the pioneer in our country in its kind which will be reinforce other researchers to do further studies in this area.

## Recommendations

Policy makers need strengthen incessant and deep discussion with service users, givers and stake holders; as well as evaluate satisfaction periodically to provide feedback to the hospital to improve satisfaction through quality service.

Study Hospital require strengthen efforts to deliver integrated quality service to improve overall patient

satisfaction at the private wing, and some hard work may be needed to improve areas, like sign and direction indicators to ease the way, drinking water, description of side effects of drugs to patients, and delivery of information regarding to symptoms look out after leaving the hospital. Furthermore, Emphasis might be needed to outpatient care without compromising inpatient care.

Researchers may plan a comparative study triangulated with qualitative design with increased sample size.

## Acronyms

AKTH	Aminu Kano Teaching Hospital
ANRS	Amhara National Regional State
ANRSHB	Amhara Ntional Regional State Health Beauró
BFHRH	Bahirdar Felege Hiwot Referral Hospital
BSC	Bachelor of Science
CAHPS	Consumer Assessment of Healthcare Providers and Systems
FMOH	Federal Ministry of Health
HMI	Hospital Management Initiative
HCS	Health Care System
HURH	Hawasa University Referral Hospital
IGMPH	Indira Gandhi Memorial Public Hospital
IPD	Inpatient department
IRRB	Institutional Review Board
JUTRH	Jimma University Teaching referral Hospital
MPH	Master of Public Health
OPD	Out Patients department
PH	Public Health
PHC	Primary Health Care
SPSS	Statistical Package for social Science
UOG	University of Gondar
WHO	World Health Organization

## Authors' Contributions

Yeshambel Agumas Ambelie pictured the original idea, designed the study and participated in all implementation stages of the project; analyzed the data and finalized to write the manuscript. Amsalu Feleke Demssie and Measho Gebreslassie Gebreegziabher were responsible for critically revising the proposal and the manuscript, also participated in its design and interpretation. All authors reviewed and approved the final manuscript.

## Competing Interests

The authors declare that they have no competing interests

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