Original article

Levels of outpatient satisfaction at selected health facilities in six regions of Ethiopia

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Abstract

Background: Satisfaction is one of the meaningful indicators of patient experience of health care services. Asking patients what they think about the care and treatment they have received is an important step towards improving the quality of care, and to ensuring that local health services are meeting patients' needs. Various studies have reported that satisfied patients are more likely to utilize health services, comply with medical treatment, and continue with the health care provider.

Objective: to assess and estimate the perceived levels of satisfaction with health services rendered at government health facilities in selected regions of Ethiopia.

Methods: A cross-sectional study that involved an exit interview was conducted in purposively selected government health centers and general hospitals in six regions of Ethiopia. Data were collected using structured questionnaire between June and September 2004. Variables used in the study were grouped and summarized into three components, namely providers' characteristics, services characteristics and cleanliness of the health facilities. Each variable was scored on a 5 point Likert-like scale, ranging from 1 (very dissatisfied) to 5 (very satisfied). The mean score 2.5 is considered as a cut-off point and scores equal and above 2.5 are taken as an indicator of users' perceived satisfaction. Both bivariate and multivariate methods of data analyses were used as deemed necessary.

Results: All the three components of investigated variables have reliability coefficients ranging from 0.57 to 0.82. Results of bivariate analyses depicted that the percentage for high mean score satisfaction with health providers' characteristics ranged from 77.25% to 93.23%; with service characteristics 68.64% to 86.48%; and satisfaction with cleanliness ranged from 76.50% to 90.57%.

Results of multivariate analysis showed that relatively more explanatory variables were found to be significant in influencing cleanliness (cleanliness of waiting place, examination room and medical equipment). Most of the explanatory variables in service characteristics were not statistically significant as compared to other components.

Conclusion: The investigators believe that improved service delivery in health facilities could be achieved by the proper and sustainable implementation of the newly initiated civil service reform program in civil service institutions in the country. Furthermore, periodic assessment of health services and further study, especially from the user's satisfaction perspective is recommended as a fundamental initiative in the improvement of the performance of health facilities. [*Ethiop.J.Health Dev.* 2008;22(1):42-48]

Introduction

Patient satisfaction is considered as one of the desired out comes of health care and it is directly related with utilization of health services. Asking patients what they think about the care and treatment they have received is an important step towards improving the quality of care, and to ensuring that local health services are meeting patients' needs. A useful way of doing this is by carrying out surveys of patients who have used the health services (1). Studies have shown that, satisfied patients are more likely to utilize health services, comply with medical treatment, and continue with the health care providers (2,3). Satisfaction is related to more partnership building, more social conversation, courtesy, clear communication and information, respectful treatment, length of consultation, cleanliness of facility, drug availability and waiting time (4,5). Measurement of patient satisfaction involves multi-dimensional aspects of patients' opinion on health care, identifying problems in health care, and evaluation of health care (6,7,8,9). Furthermore, patient satisfaction studies allow service users' voice to be heard

and affirm the importance of their experience for improved health care planning (10).

Donabedian (10) has provided a model based on structure, process, and outcome for evaluating the quality of health care. Structure refers to the attributes of organizations delivering care and the conditions under which care is provided, process relates to the professional activities associated with providing care, and outcome denotes the effects of care. Outcome includes health status improvements in knowledge, change in behavior, and patient satisfaction with care.

Donabedian explained satisfaction/dissatisfaction as patients' judgment on the quality of care in all its aspects. As many satisfaction studies on health care system are conducted in a very specific context and varies from country to country, it is understandable that any standard classification never seems entirely appropriate. According to the World Bank report in Ethiopia, the Government runs most health facilities existing today, and the public network has expanded dramatically over

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the most recent years. Seventy-one percent of hospitals, 94 percent of health centers, 82 percent of health stations and all health posts are run by the Government. Furthermore, it indicates that about 52 percent of respondents perceived the quality of care they received as good whereas about 30 percent of households who visited government health facilities consider the quality of care they received to be below average. The main reasons cited for dissatisfaction with the quality of care in public health care facilities included: drugs were not consistently available, lengthy waiting time, lack of courtesy on the part of the staff assigned in the facilities, and inadequate availability of diagnostic services (11).

In a study conducted at Jimma hospital, 57% of out patients reported satisfaction with delivered services (12). Satisfaction with care was found to have a direct relationship with an increase in age but had an inverse relation with increase in educational level of respondents. It had a significant association with length of waiting and consultation time, type of investigation performed and securing prescribed medications from hospital pharmacy.

In a survey undertaken in private clinics in Addis Ababa, high rates of satisfaction (64-99%) were found in all aspects of medical care except affordability of service charges (13). The present study was conducted to assess and estimate the perceived level of outpatient satisfaction with the provision of health services in purposively selected government health facilities in six regions of Ethiopia.

Methods
A cross-sectional survey on assessment of outpatient satisfaction at selected government health facilities was conducted between June and September 2004. The study sites which were considered for this survey were purposively selected health facilities at six major cities of the Administrative Regions of Ethiopia, namely Tigray, Amhara, Oromia, Southern Nation & Nationalities Peoples Region, Dire Dawa and Addis Ababa.

The sample size was estimated based on the assumption that 50% of the patients attending health facilities are satisfied, a 5% margin of error, and a 95% confidence level. Based on the assumption and rounding of the figure to the nearest hundred, 400 outpatients attending government health facilities were interviewed in each region. All in all, a total of 2,400 outpatients were assumed to be considered in selected six regions of the country.

Structured questionnaire was developed in English, translated into Amharic and pre-tested. The questionnaire consisted of socio-demographic information of the respondents; providers' characteristics that included (courtesy/respect, privacy, consultation time and advice given); service characteristics also included (waiting

time, service hours and drug availability); cleanliness of facility (cleanliness of waiting place, examination room and medical equipment). Each item was scored on a 5-point Likert-like scale, ranging from 1 (very dissatisfied) to 5 (very satisfied).

Local enumerators were recruited from each region among candidates who had completed high school education and who were capable of speaking the local language. Orientation training on proper administration of the questionnaire was given to enumerators. The filled in questionnaires were examined by the investigators on a daily basis to check for completeness and consistency of data.

Prior to this survey, heads of the respective regional health bureau and health facilities were briefed about the objective of the study and support was obtained to undertake the survey as proposed. All respondents aged 15 years and above were considered eligible for the survey and were selected on the basis of first-come-first-served. An exit interview was administered to outpatients who received treatments and completed their visit from the selected health facilities. Those who were forced to revisit for diagnostic purpose were excluded from the survey. Respondents were briefly informed about the aim of the study and pieces of information were collected on voluntary basis. The data were coded and entered into a computer using SPSS version.8 software and data cleaning was done to ensure for correct data entry. Both bivariate & multivariate analyses were performed using STATA version 8.

For convenience of data analyses and presentation, variables used in the present study were summarized and grouped into three components. The first component included 4 items and dealt with health care providers' characteristics (courtesy, privacy, consultation time and advice given to the patients). The second component included 3 items and dealt with service characteristics (service hours, waiting time and drug availability). Although cleanliness of the facility could be one of the aspects of service characteristics, in this study it is presented as the third component and included 3 items (cleanliness of waiting place, examination room and medical equipment). For each component, respondents' response reliability was tested by calculating reliability coefficient. The three components have reliability coefficient: $\alpha=0.8227$ good for providers' characteristics; $\alpha=0.5684$ doubtful for service characteristics; and $\alpha=0.7826$ moderate for cleanliness (14).

The respondents satisfaction score given for the items under each component averaged to create mean score satisfaction of respondent, then for analytical purposes, the mean score 2.5 is considered as a cut-off point and

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scores equal and above 2.5 are taken as an indicator of users' perceived satisfaction.

Results
Socio-demographic characteristics of the respondents
A total of six general hospitals and six health centers were included in the study. About 70% of respondents were selected from hospitals and the remaining were from health centers. Table 1 shows socio-demographic characteristics of the respondents. Of all the respondents

51% (940) were male service users and it appears that males and females were making equal use of the available services.

The majority (38%) of the respondents belonged to the age groups 15-24 years followed by 32% of the respondents in the age group 25-34 years. Forty seven percent of respondents were married, 69% Orthodox Christians, 26% were unable to read and write, students 28% and 20% were housewives.

Table 1: **The socio-demographic characteristics of respondents by health facility, selected regions of Ethiopia, June - Sept. 2004**

Background characteristics	Health Facilities		Total number
	Hospitals % (Number)	Health Centers %(Number)	
Sex			
Male	75.96(714)	24.04(226)	940
Female	64.69(590)	35.31(322)	912
Age			
15-19	60.25(144)	39.75(95)	239
20-24	70.18(313)	29.82(133)	446
25-34	70.67(412)	29.33(171)	583
35-49	71.25(285)	28.75(115)	400
50+	76.71(112)	23.29(34)	146
Marital status			
Married	70.68(622)	29.32(258)	880
Single	70.78(574)	29.22(237)	811
Divorced or widowed	65.27(109)	34.73(58)	167
Religion			
Orthodox	68.55(887)	31.45(407)	1294
Muslim	74.86(262)	25.14(88)	350
Protestant	71.79(112)	28.21(44)	156
Others	73.24(52)	26.76(19)	71
Educational level			
Illiterate	60.33(181)	39.67(119)	300
Read or write	69.35(129)	30.65(57)	186
Elementary	67.71(260)	32.29(124)	384
Secondary	73.49(449)	26.51(162)	611
Above secondary	74.81(291)	25.19(98)	389
Occupation			
Farmer	75.26(73)	24.74(24)	97
Merchant	75.50(228)	24.50(74)	302
Government employee	80.51(252)	19.49(61)	313
House wife	64.38(197)	35.62(109)	306
Student	69.30(298)	30.70(132)	430
Others	71.00(71)	29.00(29)	100

Bivariate and Multivariate Analyses
As indicated in Tables 2,3, and 4, the analyses were done using both bivariate and multivariate analyses. Results of bivariate analyses depicted that the percentage for high mean score satisfaction with health providers' characteristics ranged from 77.25% to 93.23%; with service characteristics of 68.64% to 86.48%; and satisfaction with cleanliness ranged from 76.50% to 90.57%. Patients at health centers perceived the highest level of satisfaction in all outcome variables mentioned under the three components.

Further analysis was performed using the adjusted odds ratios (AORs) with 95% confidence intervals which were obtained from multivariate logistic regression model. In the model, variables which specify the respondents' level of mean score satisfaction to cleanliness of facility, providers' and service characteristics were considered as outcome variables whereas gender, age, marital status, level of education, and type of health facility were categorized as explanatory variables.

As indicated in Table 2, at 5% level of significance the results of multivariate logistic regression on the respondents' age, marital status, and type of health

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facility were found to be statistically significant in determining respondents' mean score satisfaction to health care providers' characteristics. These results indicate that, study participants who belonged to the age group 20-24 and 35-49 were found to be 52% and 46% less likely to have high satisfaction mean score ($\geq$2.5) on health care providers' characteristics than those who were in the age group 15-19, respectively. Respondents who were single and divorced /widowed were 30% and 67%

less likely to have high satisfaction mean score ($\geq$2.5) on providers' characteristics than those who were married, respectively. Furthermore, respondents who made use of health services at the health centres were 3.23 times more likely to have high satisfaction mean score ($\geq$2.5) on heath care providers' characteristics than those respondents who received health services from the hospitals.

Table 2: **Respondents mean score satisfaction on health care providers' characteristics, selected regions of Ethiopia, June - Sept. 2004**

Background characteristics	Satisfaction Mean Score	Total	Multivariate Results
	High score ($\geq$2.5) %		(Adjusted OR : 95% C.I)
Sex			
Male	84.22	938	1
Female	87.39	912	1.13(0.84,1.51)
Age			
15-19	91.21	239	1
20-24	82.02	445	0.48(0.28,0.82)
25-34	85.42	583	0.61(0.35,1.10)
35-49	84.96	399	0.54(0.30,0.98)
50+	90.41	146	1.10(0.49,2.47)
Marital status			
Married	89.08	879	1
Single	83.83	810	0.70(0.50,0.99)
Divorced or widowed	77.25	167	0.33(0.21,0.53)
Educational level			
Illiterate	86.33	300	1
Read or write	88.65	185	1.17(0.65,2.11)
Elementary	89.30	383	1.29(0.78,2.14)
Secondary	85.43	611	1.02(0.64,1.61)
Above secondary	81.49	389	0.82(0.50,1.33)
Health Facility			
Hospital	82.56	1319	1
Health center	93.23	561	3.23(2.18,4.79)

At 5% level of significance, the results of multivariate logistic regression shows the respondents' marital status, level of education, and type of health facility were statistically significant in determining respondents' mean score satisfaction in service characteristics.

These results depicted that, respondents from the health centres were 2.30 times more likely to have high satisfaction mean score ($\geq$2.5) on service characteristics than those respondents from the hospitals. In other explanatory variables, study participants who were divorced/widowed and respondents with education level above secondary were 42% and 43% less likely to have high satisfaction mean score ($\geq$2.5) on service characteristics than those who were married and illiterate, respectively (Table 3).

In Table 4, at 5% level of significance the results of multivariate logistic regression shows the respondents' age, marital status, level of education, and type of health facility were statistically significant in determining

respondents' mean score satisfaction to cleanliness of the facilities.

These could imply that study participants who were divorced or widowed were 45% less likely to have high satisfaction mean score ($\geq$2.5) on cleanliness of the facilities than those who were married. Respondents who were in the age group 20-24, 25-34 and 35-49 were 40%, 41% and 47% less likely to have high satisfaction mean score ($\geq$2.5) on cleanliness of the facilities than those respondents in the age group 15-19, respectively. And respondents whose level of education were above secondary, secondary, and read /write were 47%, 46%, and 46% less likely to have high satisfaction mean score ($\geq$2.5) on cleanliness of the facilities than those respondents who were unable to read or write, respectively. As to the types of health facility, respondents who utilized services from the health centres were 3.09 times more likely to have high mean score satisfaction ($\geq$2.5) on cleanliness of the health facility than those study participants from the hospitals.

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Table 3: **The respondents mean score satisfaction on service characteristics, selected regions of Ethiopia, June - Sept. 2004**

Background characteristics	Satisfaction Mean Score High score (≥ 2.5) %	Total	Multivariate Results (Adjusted OR : 95% C.I)
Sex			
Male	75.08	939	1
Female	79.17	912	1.09(0.86,1.39)
Age		239	1
15-19	78.66	445	0.94(0.63,1.40)
20-24	74.16	583	1.25(0.83,1.87)
25-34	78.39	400	1.09(0.70,1.71)
35-49	77.25	146	1.83(0.99,3.40)
50+	84.25		
Marital status			
Married	79.32	880	1
Single	76.05	810	1.04 (0.79,1.39)
Divorced or widowed	73.65	167	0.58(0.38,0.88)
Educational level			
Illiterate	81.33	300	1
Read or write	80.11	186	0.94(0.57,1.45)
Elementary	82.51	383	1.08(0.71,1.66)
Secondary	77.41	611	0.84(0.57,11.25)
Above secondary	68.64	389	0.57(0.38,0.87)
Health Facility			
Hospital	73.31	1319	1
Health center	86.48	562	2.30(1.72,3.08)

Table 4: **The respondents mean score satisfaction on cleanliness of facility, selected regions of Ethiopia, June - Sept. 2004**

Background Characteristics	Satisfaction Mean Score High score (≥2.5) %	Total	Multivariate Results (Adjusted OR : 95% C.I)
Sex			
Male	80.19	939	1
Female	81.36	912	0.93(0.71,1.20)
Age			
15-19	87.45	239	1
20-24	80.22	445	0.60(0.37,0.97)
25-34	79.42	583	0.59(0.36,0.94)
35-49	78.00	400	0.53(0.31,0.88)
50+	88.36	146	1.08(0.53,2.20)
Marital status			
Married	81.82	880	1
Single	80.25	810	0.99(0.66,1.21)
Divorced or widowed	76.65	167	0.55(0.36,0.85)
Educational level			
Illiterate	88.00	300	1
Read or write	79.57	186	0.54(0.32,0.92)
Elementary	83.03	383	0.69(0.43,1.11)
Secondary	78.72	611	0.54(0.35,0.85)
Above secondary	77.38	389	0.53(0.33,0.86)
Health Facility			
Hospital	76.50	1319	1
Health center	90.57	562	3.09(2.20,4.34)

Discussion

This paper presents a study that estimated the level of perceived outpatient satisfaction with health care providers' characteristics, cleanliness of health facilities and service characteristics at purposively selected government health facilities from selected regions of Ethiopia. As indicated in bivariate analyses, percentage for mean score satisfaction with health care providers, cleanliness, and service characteristics were found to be high and ranged from 86.48% to 93.23%. In bivariate analysis, least level of perceived satisfaction percentage was reported to be 68.64% for service characteristics;

76.50 % for cleanliness of health facility and 77.25% for providers' characteristics.

It has been suggested that level of education and age are major influences on patient satisfaction (15). Patients who attained higher education were less satisfied than patients with lower level of education. It appears that, the expectation of patients with relatively higher educational attainment was high and they were more critical and as a result experienced less satisfaction. This result is in line with the study conducted at Jimma hospital, in Trinidad and Tobago, which showed the percentage of satisfied patients decreased with increasing level of educational attainment (12,16).

Of all the considered explanatory variables in multivariate analysis, gender is not significant in influencing patient satisfaction; therefore, it seems that gender does not have an influence on perceived satisfaction. As expressed by Sitiza and Wood, gender does not affect levels of satisfaction (6).

Even though, the present study has a limitation in collecting information about patients' health status during the interview, results from previous studies done on the relationship between health status and patient satisfaction have found out that patients in better health tend to respond greater satisfaction with their health care than patients in poor health (17,18). In this study, respondents who utilized services at health centers were more likely to be highly satisfied with the three components of outcome variables as compared to the respondents from hospitals. This could be due to the health care services given at health center level mainly focus on primary care and patients attending health center might be relatively in good health status as compared to patients who were referred to the hospitals for further investigation. The other possible reason could be the availability of users' friendly facilities and relatively low number patients attending the health centers as compared to hospitals.

The results of the present study are also limited to general health services, so that it doesn't shade light to specific services in the health facilities. However, from the findings it could be concluded that, of all the three components, relatively less explanatory variables were found to be significant in influencing service characteristics as compared to other components.

Some study reports indicted high dissatisfaction of patients with providers' characteristics in public health facilities (11,19). However, in the present study the percentage of satisfaction with providers' characteristics ranged from 77.25 % to 93.23 %. Furthermore, the respondents' age, marital status, and type of health facility were found to be statistically significant in determining respondents' mean score satisfaction to health care providers' characteristics.

Of all the three components, satisfaction with cleanliness ranged from 76.50% to 90.57% and relatively more explanatory variables were found to be influencing the aspects of cleanliness (cleanliness of waiting place, examination room and medical equipment).

In the present study, all in all the percentage for high mean score satisfaction ranged from 68.64% to 93.23%. This finding is in agreement with a survey undertaken in private clinics in Addis Ababa that indicated 64-99% high rate of satisfaction in all aspects of medical care except affordability of service charges (13). On the other hand, the study undertaken at Jimma hospital found out that the level of satisfaction was low (12). Furthermore, the World Bank report indicated that 52% of respondents were satisfied (11).

Although, the exaggerated level of satisfaction in the present study seems to be due to social desirability response bias plus lower expectations of patients, there appears to be relative improvement of health service delivery due to the newly initiated civil service reform program in civil service institutions of the country.

Therefore, individuals involved in health care provision and or the readers should be cautious in interpretation of the results of this study. It is, therefore, the investigators believe that improved service delivery in health facilities could be achieved by the proper and sustainable implementation of the reform program in civil service institutions in Ethiopia (20). Furthermore, it is necessary to conduct further study and periodic assessment of health services, especially from the user's satisfaction perspective, as a fundamental initiative in the improvement of the performance of health facilities in the country.

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