ORIGINAL ARTICLE

ASSESSMENT OF QUALITY OF HEALTH CARE IN JIMMA ZONE, SOUTHWEST ETHIOPIA

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ABSTRACT

BACKGROUND: ***Quality of care is an important aspect of health care delivery system that is given a priority. Quality is a multidimensional concept that has been defined in various ways. Variation in quality of care between different health care facilities is thought to reflect differences in efficiency and other organizational factors. There was no adequate study related to quality of health care in Jimma zone. Therefore, the objective of this study was to assess quality of health care in Jimma zone.***

METHODS: ***A cross sectional quantitative study design was employed to assess the quality of care with respect to structure, care process and customer satisfaction involving 640 patients and 96 care providers in Jimma zone, southwest Ethiopia. Data were collected using an interview questionnaire and observation checklist devised by the investigators.***

RESULTS: ***The study showed that, on average, the studied institutions fulfilled 153(70.4%) of the health human power need. They also fulfilled 86(62.8%) of major equipment requirement against the national standard. The composite average satisfaction level of patients was 89.1% and that of the care providers was 86.7%. Nevertheless, the respect given to patients by care providers was rated as poor. A significant proportion, 39(48.2%) of the care providers were assessed as low performance.***

CONCLUSIONS*: **Majority of study subjects rated the overall quality of care as "good". However the observation revealed that the human aspect of care was "poor". In addition, the health institutions were facing shortage of human and material resources. Thus it was recommended that the responsible bodies at the 3 levels should take actions for improving institutional capacity and performance of care providers in order to improve quality of care.***

KEY WORDS: ***Quality of care, Jimma Zone, Southwest, Ethiopia***

INTRODUCTION

Quality is an increasingly becoming an important aspect of health care that is given a priority now a days. Patients have become more aware of quality issues and want health care to become safer and of higher quality where the providers have a moral obligation to provide high-quality and safe care. In many countries, studies of patient satisfaction and experiences with health care are carried out regularly, and the results are made available to the public together with other indicators of health care quality. Assessment of patient experiences can have different purposes: describing health care from the patient's point of view; measuring the process of care, thereby both identifying problem areas and evaluating improvement efforts; and evaluating the outcome of care (1). Typically, variation in patient experiences between different health care facilities is thought to reflect differences in efficiency and other organizational factors (2).

Users' evaluations are important for continuous quality monitoring and improvement in both private and publicly provided systems of healthcare delivery. Consumer feedback alerts managers to users' needs, perceptions and concerns, identifies areas of service failure, and enables the evaluation of improvements as they are implemented. Customer surveys also encourage professionalism amongst staff, making them accountable for the quality of service they deliver. They provide an incentive throughout the organization to improve performance and a mechanism for identifying individuals who are worthy of reward. A large number of studies highlight the marketing reasons for collecting information about consumer preferences and for targeting areas of service delivery that customers perceive to be in need of quality improvement.

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There is general agreement that "quality" should be assessed from the viewpoints of major stakeholders such as users, care providers, payers, politicians, and health administrators and against explicit criteria, which reflect the underlying values of a given society. The improvement of quality is central to the reform of health systems and service delivery. All countries face challenges to ensure access, equity, safety and participation of patients, and to develop skills, technology and evidence-based medicine within available resources (2, 3).

There is growing interest to measure patient satisfaction and collect the views of patients about the services they use. Satisfaction is essential if we have to get people utilize services, comply with treatments and improve health outcomes. Assessing outcomes has merit both as an indicator of the effectiveness of different interventions and as part of a monitoring system directed to improving quality of care as well as detecting its deterioration (4). A quality assessment measures the difference between expected and actual performance to identify gaps in the health care system, which would serve as a starting point for quality improvement activities (5 6)

Recently components of quality of care were identified as a combination of access (whether individual can access health structures and processes of care that they need) and effectiveness (the extent to which care delivers its intended outcome and results). Effectiveness has two contents, clinical care and interpersonal care (7). Thus, the objective of this study was to assess the quality of care with respect to input and interpersonal aspect of care as perceived by patients and care providers.

METHODS

A facility-based cross sectional quantitative study was conducted to assess quality of healthcare provided in two hospitals and 6 health centers in Jimma zone, southwest Ethiopia from September 11- 30, 2009. Patients aged 18 years and above or proxy respondents for children plus care givers who were in service during the study period were included.

Two hospitals were selected purposely because these are the only ones in the zone and out of 14 health centers 6 randomly selected were included. The Sample size for satisfaction survey was determined using satisfaction level of a previous study at Jimma university hospital and 95% confidence interval with 4% margin of error plus 10% non-response rate (7). Accordingly the calculated sample size for exit interview was 648 patients and all 98 care providers who were on work during the study period were included. The sample was distributed to each study area equally as the objective was to assess the customers' satisfaction to give a base line data for further studies. Every second patient that fulfilled the inclusion criteria and all care providers on work during the period were included.

A structured questionnaire adopted from review of different literatures (8, 9) and pretested a month before the study was used for satisfaction study of patients and care providers. Patients were asked to rate their experiences in 3 levels; good, fair and poor which were taken for >75%, 50-75% and < 50% satisfaction level. We then categorized "good and fair" into "satisfaction" and "poor" "into dissatisfaction" to dichotomize the responses. The input capacity was assessed using checklist prepared on the basis of the national standard set by Ministry of Health (MOH) in June 2003 (10). Eight data collectors who completed 10/12 grades and speak Afaan Oromo and Amharic fluently collected the data under supervision of 2 senior public health professionals.

Ethical clearance was obtained from ethical clearance Committee of College of Public Health and Medical Sciences, Jimma University, and formal letter was written to the health institutions and consent of study subjects was obtained prior to data collection. The satisfaction data was collected by interviewing the patients while the care providers completed self-administered questionnaire themselves. Data were cleaned, entered into a computer and analyzed using SPPS for windows version 13. Statistical tests and measures of association were used as deemed necessary.

RESULTS

Input assessment: Major equipments for health services were not available in a considerable proportion in the health institutions. The input assessment of the specialized hospital outpatient department (OPD) revealed that it fulfilled 110(60.4%) of the required equipments. Its emergency room had no echocardiogram (ECG), defibrillator, wheelchair, thermometer and spatula while the injection-dressing room had no suction machine, B/P apparatus and Splints of different size at all. Laboratory fulfilled 15(26.8%) different types of required medical equipment.

In the district hospital, adult OPD fulfilled 60(65.9%), maternal and child health OPD 6(42.8%) and laboratory 28(68%) of the required medical equipment. Here there were no wheel stretchers, refrigerators, examination lights and dental extraction set at all. It totally fulfilled 94(64.3%) of the requirement. The health centers totally fulfilled 28(68.2%) of the equipment requirement (Table 1).

Table 1. Availability of major equipment in health facilities, Jimma zone, October 2009.

Work unit	Number of required standard and available equipment							
	Specialized hospital		District hospital		Health centers		Total	
	Standard	Available	Standard	Available	Standard	Available	Standard	Available
Adult OPD	113(100%)	78(69.0%)	91(100%)	60(65.9%)	23(100%)	16(69.6%)	225(100%)	154(68.4%)
MCH OPD	13(100%)	17(130.7%)	14(100%)	6(42.8%)	12(100%)	8(66.6%)	39(100%)	31(79.5%)
Laboratory	56(100%)	15(26.8%)	41(100%)	28(68.2%)	6(100%)	5(83.3%)	103(100%)	48(46.6%)
sum	182(100%)	110(60.4%)	146(100%)	94(64.3%	41(100%)	28(68.2%)	367(100%)	233(63.5%)

With regard to health human power, the specialized hospital has fulfilled 239(74.2 %) while the district hospital has fulfilled 55(91.6%) and the health centers, on average fulfilled 17 (56.6%) of the manpower requirement (Table 2).

Table 2. Availability of health Human power, Jimma zone, southwest Ethiopia, October 2009.

Category of staffs	Number of staffs= N (%)							
	Specialized hospital		District hospital		Health centers		***Total***	
	Standard	Available	Standard	Available	Standard	Available	Standard	Available
Specialists of different category	32	2	0	2	0	0	***32***(100)	*4(12.5)*
On program Specialists (different)	8	20	0	0	0	0	*8*(100)	*20(250)*
General practitioners	9	4	4	3	0	0	*13*(100)	*7(53.8)*
Health officers	0	0	3	1	5	1	*8*(100)	*2(25)*
Radiographers	20	11	2	2	0	0	*22*(100)	*13(59)*
Laboratory professionals(all type)	48	20	4	4	4	2	*56*(100)	*26(46.4)*
Nurses (all type)	194	181	42	38	17	11	*253*(100)	*230(90.9)*
Environmental Health professionals	2	1	1	1	1	1	*4*(100)	*3(75)*
All technical support staffs	9	0	4	4	3	2	*16*(100)	*6(37.5)*
Total	322(100)	239(74.2)	60(100)	55(91.6)	30	17 (56.6)	*412*(100)	*311(75.5)*

Socio-demographic characteristics of study subjects: A total of 640 (99.0%) patients participated in the exit interview. Ninety eight health care providers responded to self-administered questionnaire. Among the patient participants 367(57.3%) were males while 273(42.7%) were females. 354(55.3%) were from urban areas while 286(44.7%) from rural areas. 192(30.0 %) were illiterates and occupationally 227(35.5%) were farmers among others. Among the care providers 59(60.2%) were males and 39(39.8%) were females. Majority, 65(66.3%), of them were nurses (Table 3, 4).

Table 3: Socio-demographic characteristics of exit interviewees, Jimma zone, Ethiopia, October, 2009.

Variable	Category	Frequency of respondents of exit interview (N (%)			
		specialized hospital	District Hospital	6 Health centers	Total
Age	<19	20 (25)	12(15)	94(19.6)	126(19.7)
	20-24	32 (40)	20(25)	142(29.6)	194(30.3)
	25-34	13 (16.3)	34(42.5)	138(28.8)	185(28.9)
	35-44	11 (13.8)	12(15)	72(15.0)	95(14.8)
	45+	4 (5)	2(2.5)	34(7.1)	40(6.3)
Sex	Male	54(67.5)	59(73.8)	254(52.9)	367(57.3)
	Female	26(32.5)	21(26.3)	226(47.1)	273(42.7)
Address	Urban	45(56.3)	53(66.3)	256(53.3)	354(55.3)
	Rural	35(43.8)	27(33.8)	224(46.7)	286(44.7)
Marital status	Married	28(35)	52(65)	308(64.2)	388(60.6)
	Single	40(50)	28(35)	121(25.2)	189(29.5)
	Widowed	8(10)	0	32(6.7)	40(6.3)
	Divorced	4(5.)	0	19(4.0)	23(3.6)
Religion	Muslim	39(48.8)	46(57.5)	285(59.4)	370(57.8)
	Orthodox	24(30.0)	30(37.5)	156(32.5)	210(32.8)
	Protestant	14(17.5)	4(5.0)	27(5.6)	45(7.0)
	Catholic	2(2.5)	0	6(1.3)	8(1.3)
	Others	1(1.3)	0	6(1.3)	7(1.1)
Educational status	Illiterate	15(18.8)	16(20.0)	161(33.5)	192(30.0)
	1-6 grade	23(28.8)	18(22.5)	148(30.8)	189(29.5)
	7-12 grade	19(23.8)	31(38.8)	118(24.6)	168(26.3)
	Diploma	11(13.8)	11(13.8)	47(9.8)	69(10.8)
	BSC and above	12(15.0)	4(5.0)	6(1.3)	22(3.4)
Occupation	Farmer	20(25.0)	33(41.3)	174(36.3)	227(35.5)
	Merchant	16(20.0)	18(22.5)	96(20.0)	130(20.3)
	House wife	5(6.3)	3(3.8)	64(13.3)	72(11.3)
	Government employee	8(10.0)	16(20.0)	64(13.3)	88(13.8)
	* Others	31(38.8)	10(12.5)	82(17.1)	123(19.2)

***** Other = all daily laborers

Table 4. Socio- demographic characteristics of health care providers, Jimma zone, southwest Ethiopia, October, 2009.

Variable	Category	Frequency (N (%)			
		Jimma university hospital	District Hospital	Health centers	Total
Age	18-29	12(46.2)	14(93.3)	44(77.2)	70(71.4)
	30-39	3(11.5)	0	7(12.3)	10(10.2)
	40-49	7(26.9)	1(6.7)	3(5.3)	11(11.2)
	50 +	4(15.4)	0	3(5.3)	7(7.1)
Sex	Male	19(73.1)	13(86.7)	27(47.4)	59(60.2)
	Female	7(26.9)	2(13.3)	30(52.6)	39(39.8)
Profession	Doctors	1(3.8)	2(13.3)	0	4(4.1)
	Nurses	21(80.8)	10(66.7)	35(61.4)	65(66.3)
	Lab. technician	4(15.4)	3(20)	11(19.3)	18(18.4)
	Pharmacy technician	0	0	7(12.3)	7(7.1)
	*Others	0	0	4(7.0)	4(4.1)
Experience in heath service	<5 years	5(19.2)	12(80)	40(70.2)	57(58.2)
	5-10 years	11(42.3)	2(13.3)	8(14.0)	21(21.4)
	10+ years	10(38.5)	1(6.7)	9(15.8)	20(20.4)
Monthly income in Birr	500-1000	7(26.9)	9(60)	33(57.9)	49(50)
	>1000	19(73.1)	6(40)	24(42.1)	49(50)

* Other = Health assistants.

Ratings of patients and care provider about the care provided*:* Patients and care provider evaluated the quality of care using similar component variables as experienced or perceived on their context using a structured questionnaire covering 24 items in seven component areas. Both groups rated their satisfaction status in 3 levels; good, fair and poor which we later categorized "good and fair" into "satisfaction" and "poor" "into dissatisfaction" to dichotomize the responses.

According to the patients' assessment, the technical aspect of care related to the practice of health professionals in checking everything, keeping patients' privacy and availability of instruments during examining and treating patients was found to be worse in the specialized hospital with "poor" response rate of 27(5.7%), 6(8.0%) and 12(15.0%) at health centers, district hospital and specialized hospital, respectively. On the contrary, the interpersonal relationship between patients and care providers was rated better in the highest level setting with "good" response rate of 11(11.3%), 5(6.4 %) and 37(7.7%) for specialized hospital , district hospital and health centers, respectively. Three hundred thirty (51.6%) of the respondents claimed the health care providers reach timely for assistance as needed. However, a significant portion (40.0%) from specialized hospital complained that the care providers were not responsive. 25(31.3%) of the respondents from the specialized hospital said it was difficult to get emergency service on time. Accessing regular medical care was also more difficult in the specialized hospital with poor response rate of 20(25.0%), 6(7.5%) and 21(4.5%) for specialized hospital, district hospital and health centersrespectively.

Majority of the patients, 506(79.7%), said that they had felt comfortable while taking their medical problems to care provide. Similarly, 549(86.0%) rated the cleanliness of the health care settings as "good". This aspect was found to be worse in the specialized hospital than the lower levels. On the other hand, 85(88.5%) of the care providers reported the performance of care providers in examining and treating patients as "good" while a significant proportion 32(33.0%) of them reported the privacy keeping practice as "poor". Majority, 85 (88.5%), of the care providers rated the courtesy and timelines of care providers to help patients as "good". More than half (52.6%) of the care providers reported that patients could easily access service station in care settings. Eighty three (85.6%) rated accessing emergency medical care as "good". Majority (92.7%) the care providers also ascertained that patients could easily access regular medical care. The composite average care providers response rate showed that 81 (86.7%) of the care providers reported the Overall quality of care as "good" while 23(22.9%) reported it as "poor" (Table 5).

Table 5. Satisfaction rating of outpatients and care providers, Jimma zone, southwest Ethiopia, October, 2009

Variable of assessment	Satisfaction status	Patients Response rate (Number/%)				Care providers Response rate (Number/%)			
		Specialized hospital	District hospital	Health centers	Total	Specialized hospital	District hospital	Health centers	Total
technical competence	Good	68(85)	72(92)	450(94.3)	591(92.7)	16(61.5)	13(86.7)	47(82.4)	76(77.6)
	Poor	12(15)	6(8)	27(5.7)	46(7.3)	10(38.5)	2(13.3)	10(17.6)	22(22.4)
Interpersonal relation	Good	69(87	72(93.6)	440(92.3)	514(92)	19(73.1)	13(86.7)	51(91)	83(86.7)
	Poor	11(13.)	5(6.4)	37(7.7)	45(8)	7(26.9)	2(13.3)	5(9)	14(13.3)
Timelines of care providers	Good	48(60)	66(82.5)	442(92.1)	556(86.9)	18(69.2)	14(93.3)	53(94.6)	85(88.5)
	Poor	32(40.0)	14(17.5)	38(7.9)	84(13.1)	8(30.8)	1(6.7)	3(5.4)	11(11.5)
Accessing care	Good	60(75)	77(92.5)	455(95.5)	589(92.6)	17(65.4)	13(86.7)	44(94.4)	86(89.5)
	Poor	20(25)	6(7.5)	21(4.5)	47(7.4)	9(34.6)	2(13.3)	2(3.6)	10(10.5)
Safety of care	Good	64(80)	70(87.5)	433(90.9)	566(89.8)	15(57.7)	14(93.4)	47(82.4)	77(78.6)
	Poor	16(20)	10(12.5)	39(8.1)	64(9.2)	11(42.3)	1(6.6)	10(17.6)	21(21.4)
Amenities	Good	53(71.1)	72(90.1)	431(90.5)	557(87.4)	13(50)	14(93.4)	51(89.5)	78(79.5)
	Poor	26(32.9	7(8.9)	45(9..5)	80(12.6)	13(50)	1(6.6)	6(10.5)	20(20.5)
Overall quality rate	Good	64(80.1)	66(77.5)	430(90.1)	560(88)	13(50)	15(100)	51(89.5	79(80.6)
	Poor	16(20.0)	13(16.3)	47(9.9)	76(11.9)	13(50)	0	6(10.5)	19(19.4)
Composite average	Good	61(88.2)	70(88.6)	440(92.2)	562(89.9)	16(60.9)	13(89.3)	50(89.1)	81(86.7)
	Poor	17(21.8)	9(11.4)	37(7.8)	63(10.1)	10(39.1)	2(10.7)	6(10.9)	17(17.3)

We tried to check the association between socio-demographic characteristics the study subjects and their satisfaction status by logistic regression and it showed that only education had a significant association ($p<.001$) where illiterates were more satisfied than literates (Table 6).

Table 7. Patients' Waiting time in minute for getting services at OPD, Jimma zone, southwest Ethiopia, October, 2009

Variable	Level of Setting	N	minimum	maximum	mean	SD
Waiting time for getting treatment card	Specialized hospital	80	5.00	180.00	52.8125	36.38615
	District hospital	80	1.00	90.00	14.6500	15.44455
	Health centers	480	1.00	60.00	15.9313	14.03431
Waiting time to see the examining health professional.	Specialized hospital	79	1.00	180.00	47.8861	39.49521
	District hospital	79	2.00	240.00	21.7468	43.16143
	Health centers	480	1.00	240.00	16.5646	22.39688
Waiting time for getting laboratory Result/s	Specialized hospital	75	10.00	360.00	69.9600	74.51545
	District hospital	64	2.00	240.00	67.2656	50.40857
	Health centers	457	1.00	360.00	39.7177	46.24488
Waiting time for X-ray Result/s	Specialized hospital	49	15.00	180.00	52.0408	36.57068
	District hospital	31	1.00	360.00	51.8710	60.61394
	Health centers	No x-ray facility				

Table 6. Association patients' satisfaction with background variables, Jimma, Ethiopia, October, 2009.

Independent Variable	Satisfaction level = N (%)		P.V
	Satisfied	Unsatisfied	
Age			0.994
Less than 20	111(19.8)	15(2.7)	
20-29	169(30.2)	22(3.9)	
30-39	162(28.9)	23(4.1)	
40-49	83(14.8%)	12(2.1)	
50 and above	35(6.3)	4(0.7)	
Sex			0.273
Male	318(56.8)	46(8.2)	
Female	242(43.2	30(5.4)	
Address			0.01
Urban	304(54.3)	47(8.4)	
Rural	256(45.7)	29(5.1)	
Educational status			0.001
Illiterate	176(31.4)	16(2.8)	
1-6 grade	173(30.8)	14(2.5)	
7-12 grade	139(24.8)	28(5.0)	
Diploma	53(9.5)	15(2.7)	
BA/BSC and above	19(3.4)	3(0.5)	
Waiting time for card (minutes)			0.693
1-9	202(30.1)	25(4.5)	
10-19	128(22.8)	13(2.3)	
20-29	66(11.8)	15(2.7)	
30 and above	164(29.3)	23(4.1)	
Waiting time for Exam(minutes)			0.334
1-9	204(36.4)	30(5.4)	
10-19	179(31.9)	14(2.5)	
20-29	48(8.6)	9(1.6)	
30 and above	127(22.7)	23(4.1)	
Waiting time for Lab(minutes)			0.252
1-14	90(25.8	5(1.4)	
15-29	160(46.0)	16(4.6)	
30-44	98(28.2)	21(3.8)	

Waiting time for getting services was assessed by patients. Accordingly the waiting time for getting treatment card, medical examination, and diagnostic services was shorter in the lower levels (Table 7).

Observation of the performance of care providers: A senior public health professional and principal investigator have observed the performance of the care providers on 10 patients' examinations in each study setting in adult, children and preventive service units using a checklist after getting permission from facility heads and examining professionals to simply observe the examination process wearing a professionals' uniform. Accordingly, 49(60.5%) of the care providers called their patients by names to come into examination rooms. On the first encounter into the examination rooms, only 1(1.2%) of the care providers greeted patient in socially acceptable manner. 21(25.9%) showed respect/politeness for their patients, 62(72.0%) took enough history from patients as expected, 48(59.0%) gave patients enough chance to talk, 62(76.5%) did physical examination on patients and only 11(13.6%) tried to keep privacy of the patients (Table 8).

Table 8. Result of observation of health professionals' performance, Jimma zone, southwest Ethiopia, October, 2009.

Variable.	Response Category	Response rate (Number/%)			
		Specialized hospital	District hospital	Health centers	Total
Does the provider call a patient by name?	Yes	6(54.5)	6(60)	42(70.0)	49(60.5)
	No	5(45.5)	4(40)	18(30.0)	32(39.5)
Does Provider greet a client?	Yes	1(9.1)	0	1(1.7)	1(1.2)
	No	10(90.9)	10(100)	59(98.3)	80(98.8)
Is the provider polite enough to patients?	Yes	2(18.2)	3(30)	16(26.7)	21(25.9)
	No	9(81.8)	7(70)	44(73.3)	60(74.1)
Does Provider take history as expected?	Yes	4(36.4)	8(80)	46(76.7)	58(71.6)
	No	7(63.6)	2(20	14(23.3)	23(28.4)
Does Provider give patient chance to talk enough?	Yes	2(18.2)	7(70)	39(65)	48(59.3)
	No	9(81.8)	3(30)	21(35)	33(40.7)
Does Provider Perform Physical examination?	Yes	6(54.5)	3(39)	49(81.7)	62(76.5)
	No	5(45.5)	7(70)	11(18.3)	19(23.5)
Does Provider inform patient about his/her findings?	Yes	1(9.1)	9(90)	46(76.7)	56(69.1)
	No	10(90.9)	1(10)	14(23.3)	25(30.9)
Does the provider try to keep patient's privacy?	Yes	2(18.2)	1(10)	8(13.3)	11(13.6)
	No	9(81.8)	9(90)	52(86.7)	70(86.4)
Composite average	Yes	3(27)	5(50)	34(56.6)	42(51.8)
	No	8(63)	5(50)	26 (43.4)	39(48.2)

Suggestion given to improve the services: Patients and care providers were asked to give suggestions they believed are important for improving the services. Some gave more than one suggestion while others reserved to say nothing. The suggestions forwarded by both categories were almost similar at all levels. Accordingly, the main ones patients forwarded were; improve patient handling practice, improve supply of drugs and equipment, supervision of staff performance by responsible body, treat urban and rural people equally, reduce waiting time , shorten appointment times and avail senior doctors on top of interns in the specialized hospital while the staffs suggestions were; improve provision of drugs and equipment, institute in-service training ,increase number and mix of health workers, ,improve cleanliness of the compound and rooms, improve overall management capacity among others among others (Table 9).

Table 9:.Suggestions given for service improvement by study, Jimma zone, southwest Ethiopia, October, 2009.

	Respondent (N/%)	
Suggestion given	Patients	Care providers
Improve supply of drugs and equipment	456	56
Improve patient handling practice	321	35
Improve number and mix of care providers	321	67
supervision of staff performance by responsible body	287	38
Treat urban and rural people equally	275	21
Reduce waiting time	186	23
Improve management system	45	32
Shorten appointment times	48	11

DISCUSSION

This study assessed the status of quality of outpatient health care in Jimma zone using structural capacity, care providers and patients satisfaction survey and observation of care performance of providers in three levels namely health centers, district hospital and specialized hospital. On observation physical infrastructures of the health institutions were more or less in good condition with the exception of specialized hospital where the buildings have become very obsolete and inappropriately designed for easily accessible patient flow. The specialized hospital was also facing shortage of rooms to receive patients at its most possible capacity. Shortage of basic medical equipment was impacting quality of care in all of the study sites. This condition is similar to South African national survey result presented for 2001 summit and that of Ghanaian staffs survey which showed that 75% interviewees put structural deficiency as the second major workplace obstacle. It is also similar with the findings of Structural settings for reproductive health services in south-central Ethiopia (7, 11, 12, 13).

The overall satisfaction level (combined average response rate of "good and fair") of patients was 89.1%. This finding is higher than former study at Jimma University specialized hospital (57.1%) and that of Tigray zonal hospital (43.6 %) while worse than a Satisfaction studies conducted in Nottingham County (92.4%) and in Indian hospital OPD (90-95%). The overall satisfaction level in this study decreased as one goes from health center to specialized hospital. This study also showed that higher proportion of patients(89.1%) than care providers (86.7%) were satisfied with care provided might reflect a low expectation level of patients owing to their lifelong experience of spending a short time with health care providers(14,15).

On the other hand, this improvement in satisfaction level of patients than earlier times could be due to the newly initiated efforts of national business process reengineering (BPR) in the last one year. The average waiting time for getting treatment card (20.4 minutes) was almost similar to the waiting time in the Medical Records Department (MRD) of an Indian hospital (less than 30 minutes for more than 70% of the patients) (16).
Regarding to respect and compassion shown by the care providers, 91% of the patients and nearly 89% of the care providers reported that the behavior of the care providers was "good/fair". This rating is better than the Indian study (56%), almost similar to that of Zimbabwe (87%) and lower than that of Krakow Gmina (91%) for the patients' rating. Similarly, 86.5% patient reported that the care providers gave them sufficient information about treatment and aftercare. This finding was better than the Krakow Gmina's result of 76.8% for the same aspect of are. Regarding respecting/keeping privacy of patients one third of the interviewees claimed that is poor. Violation of privacy was found to be worst in specialized hospital (61.5%), district hospital (20%) and health centers (23%). The reason might be due to high number of practicing students standing around the patient for learning and/or working under supervision as it is the only nearby teaching hospital for Jimma University (16, 17, 18).

Eighty six percent of patients expressed positive opinion about the cleanliness which is better than 50% the Indian study. Interestingly, the care providers have more negatively evaluated the cleanliness than the patients. This variation may be related to difference in life experience of home environment of the groups as most of the patients were from rural areas.

Although the rating of patients and care providers relating patient-physician relationship was "good", the observation showed poor behavior of care providers. Accordingly, significant proportions (40.0%) of the care providers were not calling patients by their names and surprisingly only 1.2% of the care providers greeted patients in socially acceptable manner. This reflects that the value and respect the care providers pay to patients as a human being is very poor. Majority of the examining care providers (74.0%) had not given enough chance which can be an indicator for less value of involving patients in identification and treatment of their medical problems.

In conclusion, study showed that the care settings have no sufficient number and mix of professional staffs and was facing deficiency of basic medical equipments. A higher proportion of patients and care providers were satisfied with the care given in institutions. However the compassion and respect given to patients by care providers was rated "poor" especially in the hospitals. In addition, the patients' privacy keeping practice of care providers was poor at all levels. Therefore, it was recommended that the management of respective health care institutions should take actions for improving institutional capacity and performance of care providers in order to improve quality of care in the study area.

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