Client Perception on Quality of Health Care Offered To In-Patients in Public and Faith Based Hospitals in Kiambu and Nairobi Counties, In Kenya: A Comparative Study

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***Abstract*- Introduction**

Quality is the ability to deliver services that satisfy the consumer's needs whereas service quality is the ability to meet or exceed customer expectations, providing quality healthcare is an ethical obligation of all healthcare providers and receiving quality care is a right of all patients. Africa Countries including Kenya has witnessed general deterioration in health indicators due to rapid population growth, child nutrition problems, poverty, HIV/AIDS, acute respiratory infections, malaria, diarrhea, and poor quality health facilities and services. Nairobi city with high population and Kiambu a neighboring County, the Public and some Faith-based hospitals in these two counties experience shortage of drugs and medical supplies, unaffordable out-of-pocket costs for health services' consumers, poor quality of care due to overcrowding of the patients, thus services provided are considered unsatisfactory.

Objective

To compare client perceptions on quality of health care offered to patients admitted into public and Faith-based hospitals in Nairobi and Kiambu Counties in Kenya.

Methods

A descriptive cross-sectional study of client perception on quality of health care offered to in-patients in public and faith based hospitals in Kiambu and Nairobi, Kenya was conducted. A sample of 384 patients, 238 from public hospitals and146 from Faith- based hospitals, and 276 were female and 146 male. Comparative analysis of quality of health care in faith based hospitals with public hospitals by use of SERVQUAL dimensions to asses' patient perception was carried out.

Results:

Faith-based hospitals overall mean was (4.23 on a scale of 1 to 5 & SD 0.347) showing positive opinions and public hospitals mean was 2.62 (on a scale of 1 to 5 & SD 0.760) indicating negative opinions among all five (Tangibility, Responsiveness, Reliability, Assurance and Empathy) dimensions. The overall T test was -24.688; there was a mean difference in the patient's opinions of public and faith-based hospitals on perception of service quality. There was significance difference at $p \leq 0.05$; T test and Chi-Square p value was .000 for all five dimensions.

Conclusion

Patients had positive perception on service quality in faith-based and negative perception on service quality in public hospitals. There is need for re-structuring health service in public hospitals, to put in empowerment strategies to provide patient centeredness which is continuous quality health care improvement process.

***Index Terms*-** Client Perception, Quality of Health Care, Public and Faith Based Hospitals, Kiambu and Nairobi Counties, Kenya.

I. Introduction

Quality is the ability to deliver services that satisfy the consumer's needs, providing quality healthcare is an ethical obligation of all healthcare providers (Zineldin, 2006) and receiving quality care is a right of all patients Pickering (1991). Service quality was defined by Pui-Mun *et al.* (2006) as the ability to meet or exceed customer expectations. Sub-Saharan Africa is ranked among the lower 50% in terms of service quality performance of health systems. Report indicates that, Kenya's health gains of the 1980s and 90s have begun to reverse. According to the World Health Organization (WHO), the country recently witnessed a general deterioration in health indicators due to rapid population growth, child nutrition problems, poverty, HIV/AIDS, acute respiratory infections, malaria, diarrhea, poor quality health facilities and services (WHO, 2008). Recent systematic reviews have highlighted quality failings in both public and private care settings in developing countries (Berendes *et al*., 2011) and have added power to earlier calls to standardize and assure the quality offered by private providers (Patouillard *et al.*, 2007).

There is a lack of public trust and confidence in government hospitals in terms of quality services provided at their end due to insufficient infrastructure facilities, lack of responsiveness, low

reliability, and absence of empathy, obsolescent equipments, and minimal medicines availability (Zahida,2012). This challenge demands well developed performance health systems to efficiently and effectively address the problem WHO (2000). The current study therefore uses SERVQUAL instruments to assess the perception of patients on service quality in public and faith-based hospitals in Kenya.

II. Significance of the Study

The findings of study would be relevant and valuable to stakeholders in health care sector including health system developers, policy makers and more importantly to hospital management team to understand areas of improvement. This research results would further help healthcare providers to understand customer‘s preferences by identifying the service quality dimensions that contribute to patients satisfaction. The hospitals could use the instrument (questionnaires) of this study to collect data about their patients’ perceptions in order to make strategic decisions. Finally, the findings would direct intervention efforts to improve health care provision for better treatment outcome for patients.

III. Methods

A descriptive cross-sectional study of client perception on quality of health care offered to in-patients in public and faith based hospitals in Kiambu and Nairobi was conducted. Study setting was based in Public and faith-based hospitals. This study targeted all the in-patients aged 18 years and above who attend health services in level four public and faith based hospitals in Kiambu and Nairobi counties in Kenya, Kothari (2008).

The sample size of 384 in-patients was determined using Fisher’s formula. Sampling the study used stratified random sampling to select 384 in- patient from the target population. Proportionanate stratification was used to select the sample size per hospital and strata subsets were then pooled to form a random sample (Greener, 2008). Sample size in each stratum was determined proportional to the stratum's size. Systematic sampling was used to select patient to be interviewed at exit point. Questionnaire was developed for perception of patients on service offered by faith- based with public hospitals. The questionnaire contained structured or closed questions that required respondents exercise judgment on five-point Likert scale was used. Twenty six instruments were modified from SERVQUAL instruments to reflect the environment in which the study was undertaken (Brysland and Curry, 2001).

Descriptive statistics were derived and used to analyze (using SPSSS version 22.0) perception of patients on service quality by use of percentage, frequencies, mean and standard deviation. Inferential statistical analysis was undertaken to enhance further insights of the data on perception of patient on service quality. Formulated hypothesis was tested using; Chi-Square to test significant differences among the type of hospitals at P value 0.05 and T- test to test the difference in means between public with faith-based hospitals service quality, and this was an equivalent of independent sample T-Test.

Approval to undertake the research was sought and obtained from Maseno University Graduate School and Maseno University School of Public Health and Community Development; permission to conduct research in hospitals was obtained from National Council for Science and Technology, Kenya and from ethics committee of the study hospitals.

IV. Results

Descriptive analysis of five dimensions containing 26 scale questions on perception of patients on service quality in public with faith-based. The results of the respondents in Table 1.1 reveal that overall perception of the patients on tangibility dimension was perceived with higher satisfaction physical facilities appealing 64.4%, cleanliness in the ward 63.7%, toilet clean 58.9%, hospital linen are clean 58.9% in faith-based hospitals as compared with public hospitals, among all factors on tangibility except the cost of services that was perceived low in both public and faith-based hospitals the satisfaction was 23.5% in public hospitals and 23.3% in faith-based hospitals. The tangibility factor that the patients perceived to be worse in public hospitals was cleanliness of the toilet that scored as low as 1.3% and hospital linens cleanliness score 44.5% strongly disagree. Generally the level of cleanliness in public hospitals was rated low among all the factors on tangibility dimension in public hospitals as shown in Table 1.1.

Table 1.1: Tangibility

Type of facility		Strongly Disagree		Disagree		Undecided		Agree		Strongly Agree		Total	
		n	%	n	%	n	%	n	%	n	%	n	%
Public	Physical facilities are visually appealing	45	18.9	63	26.5	3	1.3	91	38.2	36	15.1	238	100.0
Faith based		0	0.0	3	2.1	2	1.4	47	32.2	94	64.4	146	100.0
Public	Cleanliness in the ward/room is high	88	37.0	107	45.0	2	.8	35	14.7	6	2.5	238	100.0
Faith based		0	0.0	2	1.4	0	0.0	51	34.9	93	63.7	146	100.0

Public	Toilet facilities are clean	144	60.5	70	29.4	4	1.7	17	7.1	3	1.3	238	100.0
Faith based		0	0.0	5	3.4	0	0.0	55	37.7	86	58.9	146	100.0
Public	Hospital linens are clean	106	44.5	79	33.2	0	0.0	48	20.2	5	2.1	238	100.0
Faith based		0	0.0	9	6.2	1	.7	50	34.2	86	58.9	146	100.0
Public	Diagnostic services are available and reliable	70	29.4	64	26.9	3	1.3	89	37.4	12	5.0	238	100.0
Faith based		0	0.0	20	13.7	5	3.4	63	43.2	58	39.7	146	100.0
Public	The hospital has adequate health service providers	73	30.7	93	39.1	4	1.7	59	24.8	9	3.8	238	100.0
Faith based		0	0.0	51	34.9	5	3.4	51	34.9	39	26.7	146	100.0
Public	The medicines are available in this hospital	64	26.9	80	33.6	4	1.7	67	28.2	23	9.7	238	100.0
Faith based		2	1.4	14	9.6	1	.7	59	40.4	70	47.9	146	100.0
Public	The cost of services received in this hospital is reasonable	26	10.9	73	30.7	4	1.7	79	33.2	56	23.5	238	100.0
Faith based		36	24.7	30	20.5	5	3.4	41	28.1	34	23.3	146	100.0

From Table 1.2 on tangibility 100% of patients in public facilities interviewed disagreed whereas 80.4% of those in faith-based facilities agreed. In public 100% strongly disagreed while in faith-based 92% strongly agreed among responded interviewed.

Table 1.2 Tangibility by type of facility

			Type of facility		
			Public	Faith based	Total
Tangibility	Strongly disagree	Count	17	0	17
		% within Tangibility	100.0%	0.0%	100.0%
	Disagree	Count	121	0	121
		% within Tangibility	100.0%	0.0%	100.0%
	Undecided	Count	74	10	84
		% within Tangibility	88.1%	11.9%	100.0%
	Agree	Count	22	90	112
		% within Tangibility	19.6%	80.4%	100.0%
	Strongly agree	Count	4	46	50
		% within Tangibility	8.0%	92.0%	100.0%
Total		Count	238	146	384
		% within Tangibility	62.0%	38.0%	100.0%

Under null hypothesis, there is independence (no relationship) in perception of patients by type of health facility under tangibility dimension. With Pearson Chi Square value of 0.000 less than the set p value 0.05 this results being statistically significant, we reject the null hypothesis and conclude that perception among patients in the two types of facilities within tangibility dimension is dependent. Patients

from faith based hospitals as from the descriptive statistics show they have positive perceptions for the tangibility dimension whereas those from the public hospitals have negative perceptions and this has been confirmed as being statistically significant with the Chi-Square analysis.

Table 1.3 Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	255.979[a]	4	.000
Likelihood Ratio	309.907	4	.000
Linear-by-Linear Association	220.891	1	.000
N of Valid Cases	384		

The results of perception of patients on service quality as shown in Table 1.4 indicates that in public hospitals the dimension of tangibility, patients perceived low satisfaction that's 7.9% strongly agree and 25. 5 % agree while in faith-based hospitals patient perceive high satisfaction with service quality on tangibility of 47.9% strongly agree and 35.7% agree. On the other hand dimension of responsiveness public hospital scored 5.8% strongly agree and 27.5% agree showing that the perception of patients was low on dimension of responsiveness on service quality. Whereas, patients from faith-based hospitals perceived high satisfaction with responsiveness scoring 43.2% strongly agree and 38.9% agree. This represents Patients perceptions regarding service quality on reliability in public hospitals are not up to satisfaction that's 6.4% strongly agree and 36.3% agree respectively in the faith-based hospitals patient perceived services quality on assurance to be satisfactory with 40.4% strongly agreed and 53.6% that the dimension of assurance was perceived with higher satisfaction. Among the respondents interviewed they perceived low satisfaction with the dimension of empathy in public hospitals with rating 4.8% strongly agreed and 29.9% agree while in faith-based hospitals patients perceived higher satisfaction with the service quality dimension on empathy with rating as 49.6% strongly agree and 42.1% agree. Therefore, the results of the respondents in Table 1.4 reveal that overall perception of the patients on five dimensions of service quality they perceived higher satisfaction in faith-based hospitals as compared with public hospitals among all five dimensions.

Table 1.4: Perception of Patients on Service Quality in Public and Faith-Based Hospitals

	Strongly Disagree	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**	**Total**
Tangibility Public Hospitals	32.4%	33.0%	1.3%	25.5%	7.9%	100%
Tangibility Faith Based Hospitals	3.3%	11.5%	1.6%	35.7%	47.9%	100%
Responsiveness Public Hospitals	23.5%	39.7%	3.4%	27.5%	5.8%	100%
Responsiveness Faith Based Hospitals	2.7%	10.8%	4.4%	38.9%	43.2%	100%
Reliability Public Hospitals	17.0%	37.8%	2.4%	36.3%	6.4%	100%
Reliability Faith Based Hospitals	0.0%	3.8%	2.2%	53.6%	40.4%	100%
Assurance Public Hospitals	21.1%	34.9%	1.8%	28.0%	14.3%	100%
Assurance Faith Based Hospitals	0.5%	6.8%	1.0%	42.1%	49.6%	100%

Empathy Public Hospitals	20.7%	41.1%	3.5%	29.9%	4.8%	100%
Empathy Faith Based Hospitals	0.0%	6.7%	1.5%	46.2%	45.5%	100%

In the Figure 1.1 on perception of patients on service quality in public and faith-based hospitals, across all five dimensions as shown in the Figure 1.1 shows that patients are overall satisfied from the services provided by faith-based hospitals as compared with service provided by public hospitals as shown in the Figure 1.1.

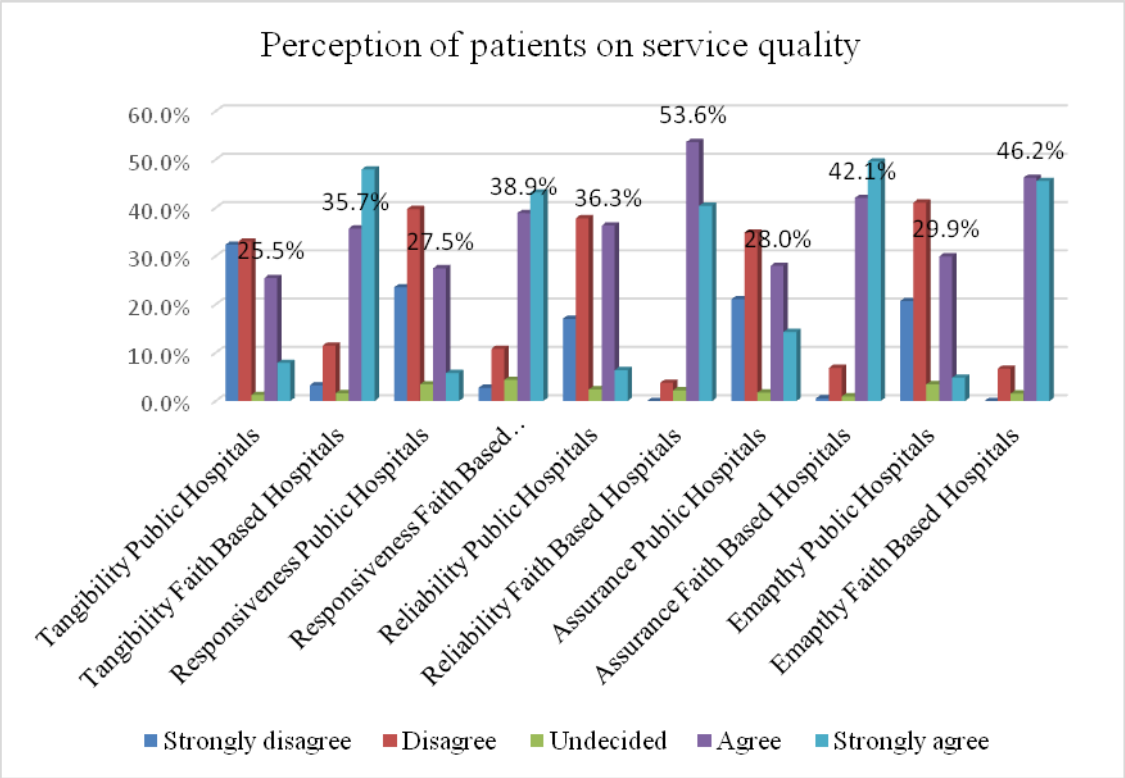

Figure 1.1: Perception of patients on service quality

Perception of Patients on Service Quality in Public and Faith- Based Hospitals

The descriptive analysis of mean and standard deviation of the respondents in faith-based hospitals reveals that overall satisfaction of the patients (i.e.4.23 on a scale of 1 to 5, where 1 = Strongly disagree and 5 = Strongly Agree) is approximately near to 4.0 which is closer to the opinion "Agree" that shows patients on overall are satisfied with the services provided by Faith- based hospitals. Among the Individual variables, all factors have a mean greater than 4 which indicate that patients have high opinion on all the five dimensions. The standard deviation in all cases is less than 1 this shows that there is less variation in the responses while in public hospitals descriptive analysis shows that the respondents in public hospitals reveals that overall satisfaction of the patients (i.e.2.62 on a scale of 1 to 5, where 1 = Strongly disagree and 5 = Strongly agree) is approximately near to 2.0 which is closer to the opinion "Disagree" that shows patients on overall are not satisfied with the services provided by Public hospitals. Among the Individual variables, all of them have a mean less than 3 which indicated that patients have low opinion on all the five dimensions. The standard deviation in all cases is closer to 1 that shows that there is great variation in the responses as shown in Table 1.5.

Table 1.5: Descriptive Statistics of Mean

Dimensions Type of facility	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Tangibility: Faith-based hospitals	146	3	5	4.14	0.504
Public hospitals	238	1	5	2.43	0.778

Responsiveness: Faith-based hospitals	146	3	5	4.09	0.379
Public hospitals	238	1	5	2.52	0.815
Reliability : Faith-based hospitals	146	3	5	4.31	0.448
Public hospitals	238	1	5	2.77	0.909
Assurance : Faith-based hospitals	146	3	5	4.33	0.480
Public hospitals	238	1	5	2.79	0.913
Empathy : Faith-based hospitals	146	3	5	4.31	0.516
Public hospitals	238	3	5	2.57	0.760
Overall: Faith-based hospitals	146	3	5	4.23	0.347
Overall: Public hospitals	238	1	5	2.62	0.891

T test analysis for perception of patient on public and faith-based hospitals where one sample test. T test was used to test if there was a mean difference in the dimensions taking the neutral rating as the mean. The hypotheses for the dimensions were formulated as shown in Table 1.6 of One-Sample Test for Public Hospitals.

H1: The opinion of patients regarding tangibility is neutral (μ = 3)
H2: The opinion of patients regarding reliability is neutral (μ = 3)
H3: The opinion of patients regarding responsiveness is neutral (μ = 3)
H4: The opinion of patients regarding assurance is neutral (μ = 3)
H5: The opinion of patients regarding empathy is neutral (μ = 3).

From results in Table 1.6 all the dimensions are statistically significant at 0.05. The means of the patients have either dominated positive or negative perception about the factors within all the five dimensions. From the t value mean different at 95% confidence interval of the difference determined whether the patient agree or disagree depending on the values (positive or negative). As in the Table 1.6 faith-based hospitals had positive values whereas those from public hospitals had negative values. The results indicate that respondents from faith-based hospitals agreed with the dimensions whereas those from public hospitals disagreed.

Table 1.6 : One-Sample Test for Public and Faith-based hospitals

	Test Value = 3											
	t		df		Sig. (2-tailed)		Mean Difference		95% Confidence Interval of the Difference			
									Lower		Upper	
	Public	Faith-Based	Public	Faith-Based	Public	Faith-Based	Public	Faith-Based	Public	Faith-Based	Public	Faith-Based
Tangibility	-11.20	27.26	237	145	0.000	0.000	-0.56	1.136	-0.66	1.05	-0.47	1.22

	9						5					
Responsiveness	-9.036	34.74	237	145	0.000	0.000	-0.477	1.089	-0.58	1.03	-0.37	1.15
Reliability	-3.853	35.24	237	145	0.000	0.000	-0.227	1.307	-0.34	1.23	-0.11	1.38
Assurance	-3.465	33.57	237	145	0.001	0.000	-0.205	1.333	-0.32	1.25	-0.09	1.41
Empathy	-7.42	30.6	237	145	0.000	0.000	-0.429	1.307	-0.54	1.22	-0.31	1.39

In the table 1.7 the summary of descriptive results shows that the mean score of public are less than 3.0 implying negative perception while the mean score in faith-based is more than 3 indicating positive perception

Table 1.7: Summary of Descriptive Statistic of Faith-Based & Public Hospitals

Type of facility		N	Mean	Std. Deviation	Std. Error Mean
Tangibility	Public	238	2.43	.778	.050
	Faith- based	146	4.14	.504	.042
Responsiveness	Public	238	2.52	.815	.053
	Faith-based	146	4.09	.379	.031
Reliability	Public	238	2.77	.909	.059
	Faith- based	146	4.31	.448	.037
Assurance	Public	238	2.79	.913	.059
	Faith- based	146	4.33	.480	.040
Empathy	Public	238	2.57	.891	.058
	Faith- based	146	4.31	.516	.043
Overall	Public	238	2.62	.760	.049
	Faith- based	146	4.23	.347	.029

The independent-samples t-test was used to compare the means between hospital types that is public and faith-based hospitals for each dimension and an overall for all the patients. The analysis depicting that all the hypotheses are rejected and there is significant difference in the opinion of patient's perception on service quality in public and faith-based hospitals. That is the satisfaction factors differ on the basis of the hospitals type among all the five dimensions of service quality.

Table 1.8: Independent Samples Test for Public and faith-Based Hospitals

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Tangibility	Equal variances assumed	23.007	.000	-23.566	382	.000	-1.701	.072	-1.843	-1.559

	Equal variances not assumed			-26.008	380.870	.000	-1.701	.065	-1.830	-1.573
Responsiveness	Equal variances assumed	68.384	.000	-21.817	382	.000	-1.566	.072	-1.708	-1.425
	Equal variances not assumed			-25.501	360.291	.000	-1.566	.061	-1.687	-1.446
Reliability	Equal variances assumed	67.189	.000	-19.018	382	.000	-1.533	.081	-1.692	-1.375
	Equal variances not assumed			-22.035	367.683	.000	-1.533	.070	-1.670	-1.397
Assurance	Equal variances assumed	62.105	.000	-18.817	382	.000	-1.538	.082	-1.699	-1.377
	Equal variances not assumed			-21.581	374.412	.000	-1.538	.071	-1.678	-1.398
Empathy	Equal variances assumed	41.442	.000	-21.422	382	.000	-1.735	.081	-1.894	-1.576
	Equal variances not assumed			-24.157	380.891	.000	-1.735	.072	-1.876	-1.594
Overall	Equal variances assumed	65.183	.000	-24.168	382	.000	-1.615	.067	-1.746	-1.483
	Equal variances not assumed			-28.320	357.966	.000	-1.615	.057	-1.727	-1.503

V. Conclusion

The study revealed that faith-based hospitals patients had higher satisfaction perception on services quality as compared to public hospitals. Therefore, the study revealed that there is difference in patient perception of service quality between faith-based and public hospitals. The current study has provided evidence that patients in public hospitals are found dissatisfied with health service provided.

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