

The Clients' Voice: Satisfaction with HIV/AIDS Care in a Public and Private Health Facility in Kabale District, Uganda

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Abstract

Background: In Uganda in 2008, about 121,218 people were on Antiretroviral therapy, which was 40% of all persons eligible for it then. Despite increasing availability and accessibility to HIV/AIDS care services, there are limited data on the effect of this scale-up on the quality of care in Uganda. Little information is available on clients' thoughts about the services. This paper examines client satisfaction with quality of HIV/AIDS care services in a public and a private health facility.

Methods: In total, 216 client exit interviews were conducted in two clinics in Kabale district, south western Uganda using the SERVQUAL tool. Data were analyzed by looking at differences in mean scores between clients' expectations and perceptions. Paired *t*-tests and chi-square tests were done.

Results: Overall, clients were dissatisfied with HIV/AIDS care, in both the public and private health facility. In both facilities and overall, tangibles was rated worst and responsiveness was rated best. Drug shortages were frequent and caused dissatisfaction.

Conclusion: The findings suggested that quality of HIV/AIDS care in Kabale was lacking. They indicate that managers and policy makers need to pay more attention to it, especially physical facilities, equipment, ability of service providers to perform the service accurately, and drug shortages. Future research can be done on a larger scale within the district and beyond.

Keywords: HIV/AIDS; Satisfaction; Quality; SERVQUAL

Introduction

In Uganda, the health system is decentralized and arranged into national referral hospitals, regional referral hospitals, and general hospitals. Health service delivery in Uganda is also made up of both the public and private sectors, of which each provides about 50% of reported outputs [1]. In the public sector, there are also health centres (HC) from HC IVs, HC IIIs, HC IIs and HC Is. Different health services are provided at each of these levels of care [2]. The system is supposed to work by referral. At the lowest level is the HCI, or village health teams. These are volunteers who are supposed to move within the communities, since they do not actually have a physical health facility, doing things like distributing drugs. However, they often do not have the financial facilitation to do so. The next level is the HCII, which only have basic outpatient services to treat common diseases. An enrolled nurse, midwife, nursing assistants, and health assistants should staff them. More complex cases should be referred to the HCIII, which should provide basic curative, promotive, and preventive care, including laboratories and maternity services. They should be led by a senior clinical officer in addition to the other staff found in HCII, but in larger numbers. The next level if the HC IVs (equivalent to district hospitals), providing maternity, promotive, preventive, inpatient, laboratory, surgery, blood transfusion, consultation, research, and other services. This should have a doctor in addition to the other staff. However, it should be noted that health facilities in Uganda are grossly understaffed at all levels, thus causing problems in relation to the quality of care.

The HIV/AIDS pandemic in Uganda continues to be a big problem, with its prevalence estimated at 6-7% by the Uganda AIDS Commission [3]. The same source shows that HIV/AIDS care and support services are widely available throughout the country, which has helped avert many HIV/AIDS deaths. Services include HIV Counseling and Testing

(HCT), Antiretroviral Therapy (ART), Prevention of Mother-To-Child Transmission of HIV/AIDS (PMTCT), and treatment of opportunistic infections. The government and a variety of partners including non-governmental organizations, international organizations, donors, and the private sector provide them. The Ministry of Health (MOH) in the Uganda Service Provision Assessment Survey [4] reported that 61% of the facilities they appraised (both public and private) offered HIV/AIDS care and support.

There continues to be a high and ambitious expansion drive in the provision of HIV/AIDS care, for example the target for the year 2011/12 was to have 67% of people with HIV/AIDS receiving ART, up from 39% in 2007 [5]. Similarly, 57% of health facilities in Uganda from Health Centre IV and above are providing ART, with a target of 100% for the year 2011/12 as disclosed by the same report. Nonetheless, there are few assessments of how the process of scale-up of HIV/AIDS care affects its quality, efficiency, and cost effectiveness [6].

Quality in health care can be divided into technical quality and functional quality [7]. They define technical quality based on the technical accuracy of the diagnoses and procedures, while functional quality refers to the manner in which the health care service is delivered

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to the patient, relying more on the patient's perception. Another popular model used to assess quality of care is the Donabedian model which categorizes dimensions of quality according to structure (e.g. if staff are qualified and facilities well equipped); process (e.g. if ART is given according to established protocols); and outcome (e.g. rates of adherence to ART or patient satisfaction) indicators [8].

Quality of care has an important effect on client satisfaction, a key component of health care delivery that has various definitions. According to Oliver, 1981, client satisfaction is a summary psychological state due to disconfirmed expectations being combined with the consumer's earlier feelings about the consumption experience [9]. It has also been described as the difference between what clients expect to receive while looking for a service and what they actually get [10]. Client satisfaction is imperative because it provides direct feedback to service providers, is a significant indicator of quality of services, it shows the relationship between services and treatment outcomes [11], and is potentially a direct marker of system performance [12].

Client satisfaction has been studied using a variety of frameworks [13-16]. One of the frameworks successfully used globally is the SERVQUAL tool / framework, created by Parasuraman et al. It measures service quality by assessing five dimensions of a service, which can influence clients' satisfaction - tangibles, reliability, responsiveness, assurance and empathy. Originally developed as a marketing tool, it has been adapted for use in assessing patient satisfaction with different aspects of health care like general health services, eye treatment, comparing group and solo clinic practices, and chronic kidney disease screening [17-18]. Most of these studies identified SERVQUAL as being useful in measuring service quality and client satisfaction and recommended its use. It has been demonstrated as an important tool in assessing service quality and client satisfaction in the health sector and has been validated for use in health care [7].

In Uganda, the government owns 2,242 health centres and 59 hospitals, compared to 269 health centres and 8 hospitals that are Private For-Profit (PFP) and 613 health facilities and 46 hospitals that are private not-for-profit [2]. A minimum package of health services has been developed for all levels of health care for both the private and the public sector [2], but some challenges have been noted in relation to quality of services offered [19]. Not much information is available on client satisfaction in the public and private health facilities. This study was done to determine client satisfaction with the quality of HIV/AIDS care services in a public and a private health facility in Kabale district, Southwestern Uganda.

Methods

Design, participants, setting, and sample size

A comparative cross-sectional survey was conducted in two health facilities-one public and the other private. Facilities were purposively selected and they were of comparable size and offering similar services, although the public one had 610 clients receiving general HIV/AIDS care and 225 clients on ART while the PFP had approximately 600 people receiving HIV/AIDS care. Sample size was calculated using the formula by Friedman et al. 1998 as shown below.

$$n = \frac{2(Z_{\alpha} + Z_{\beta})^2}{\text{Effect size}^2}$$

A total of 216 patients (108 from each facility) were required to estimate a difference between the two facilities with a power of 90%, type 1 error of 0.05 and a non-response rate of 10%. These were sampled systematically. Clients included in the study were receiving HIV/AIDS

care at either of the study sites and were at least 18 years of age, while those too ill to participate were excluded.

The Higher Degrees, Research and Ethics Committee at Makerere University School of Public Health, on behalf of Uganda National Council for Science and Technology, approved the study. The Kabale District Health Officer also granted permission, directors of the study sites, and written informed consent.

Confidentiality during interviews was ensured by conducting them separately from where the other services were being delivered. This also helped to avoid disturbing the ongoing service provision, especially since client exit interviews were done. Numbers identified respondents names were not asked for, and questionnaires. Although some signed consent forms, many who could not write used their thumb prints. In this way, respondents could not easily be identified. Furthermore, the questionnaires, once filled in, were taken away and kept in a safe place by the researchers, away from the health facilities. The staffs at the health care facilities were not allowed to look at the questionnaires or to attend the interview sessions. Lastly, the actual names of study sites have not been revealed, in order to safeguard confidentiality.

Measures

Data were collected through interviewer-administered client exit interviews using an adapted SERVQUAL tool. This is a multiple-item scale that measures client satisfaction by looking at clients' expectations and perceptions about quality. It assesses five dimensions of service quality: Tangibles (physical facilities, equipment and the physical appearance of the staff members at the health facility); Reliability (ability to perform the promised service dependably and accurately); Responsiveness (willingness to help customers and provide prompt service); Assurance (knowledge and courtesy of employees and their ability to inspire trust and confidence) and Empathy (caring, individualized attention the facility provides to its customers). It has 44 items, of which the first 22 measure consumers' expected level of service for HIV/AIDS care (expectations) and the other 22 matching items measure consumers' perceptions of the present level of service provided by the particular health facility (perceptions). The five dimensions were assessed on a 5-point like rt scale, with 1 as 'strongly disagree' and 5 as 'strongly agree'.

The questionnaire was translated from English to *rukiga* (the predominant local language in Kabale district), using forward and backward translation. Experts in both languages did this, until it was certain that the meaning of the questions was the same in both languages. This was in order to ensure validity and reliability. The interviews were conducted in either English or *rukiga*, according to the respondent's preference.

Data were analysed using Stata SE software version 8.2. The total perception scores for all respondents were calculated and then divided by 22, which was the number of items in the questionnaire, in order to get an average. This was done for each item, dimension, and health facility, as well as for the expectations. Client satisfaction was calculated by subtracting average expectation scores from average perception scores for each client interviewed to get a service quality gap score and then calculating the mean for each health facility (mean scores analysis). The size of the gap between perceptions and expectations dictated the extent to which clients were satisfied. Negative figures showed that clients were dissatisfied while gap scores equal to or above zero were positive, showing satisfaction.

Paired t-tests were done to establish whether the gap between

expectation and perception scores was different overall and within the dimensions ($p < 0.05$). Client satisfaction (measured as a gap score) was categorized into a binary variable with two groups. All respondents with negative gap scores were put into one group of "not satisfied respondents" (this group was coded as 0). Respondents who had a gap score of 0 and above were also grouped together as "satisfied" (this was coded as 1).

Results

Respondents' characteristics

The final number used in the analysis was 207 respondents (due to missing data). About 72% of the respondents were females and 85% were farmers, with an age range of 18 to 65 years and mean age of 40.5 (SD 9.3). About 55.5% had primary school as their highest education level, 76.8% had spent between one and five years receiving HIV/AIDS care, and 158 respondents (76.3%) who took part in the study were receiving ARVs.

Client satisfaction with the different items

Table 1 shows the expectations, perceptions, and service quality gaps.

Expectations: Respondents at the public health facility generally had high expectations about how HIV/AIDS services should be delivered. Their lowest score was for the item 'employees well supported to work'. The highest score at the private health facility was for 'accurate records', and lowest was for 'have clients' interests at heart'.

Perceptions: At the public facility, there were lower perceptions of service delivery compared to the private one for some items like

'provide services at promised time' but higher for 17 others. The lowest score in both health facilities was for 'up-to-date equipment'.

Service quality gaps: The private facility had nine positive scores and the public had five. Overall, gap scores were positive for nine items, thus satisfaction on the respondents' part. These were the items 'sympathetic and reassuring; say exact time for services; prompt service from employees; employees always willing to help; clients trust employees; clients feel safe with employees; polite employees; clients get individual attention and employees give personal attention (this had the highest score at 0.04). The rest were negative, with the biggest gap / dissatisfaction for 'up-to-date equipment' at -0.54 and the smallest negative gap at -0.03 for 'well dressed employees; facilities match services; accurate records and prompt response to clients requests'.

The overall average score was -0.06, showing that respondents were dissatisfied with services received. Both health facilities had a negative average score, with -0.09 for the public and -0.03 for the private.

When client satisfaction was converted into a binary variable, analysis showed that in the public health facility about 58% of respondents were satisfied, while the figure was at 64% in the private facility.

Client satisfaction with the dimensions

Analyses were also done in order to determine which particular dimensions of service delivery the clients were satisfied with, as shown in Table 2. All dimensions were rated negatively overall, except responsiveness (although it scored negatively in the public facility).

Tangibles

Overall, perceptions were rated at 4.78, expectations at 4.95 and

STATEMENT	PUBLIC			PRIVATE			OVERALL		
	P	E	P - E	P	E	P - E	P	E	P - E
1.Up-to-date equipment	4.20	4.96	-0.76	4.60	4.93	-0.33	4.40	4.94	-0.54
2.Visually appealing facilities	4.93	4.99	-0.06	4.85	4.90	-0.05	4.89	4.94	-0.05
3.Well dressed employees	4.98	5.00	-0.02	4.90	4.94	-0.04	4.94	4.97	-0.03
4.Facilities match services	4.97	5.00	-0.03	4.85	4.89	-0.04	4.91	4.94	-0.03
5.Facilities keep promises	4.76	5.00	-0.24	4.78	4.92	-0.14	4.77	4.96	-0.19
6.Sympathetic and reassuring	5.00	5.00	0.00	4.92	4.90	0.02	4.96	4.95	0.01
7.Dependable	4.94	5.00	-0.06	4.91	4.92	-0.01	4.92	4.96	-0.04
8.Provide services at promised time	4.82	5.00	-0.18	4.88	4.93	-0.05	4.85	4.96	-0.11
9.Accurate records	4.95	4.97	-0.02	4.92	4.95	-0.03	4.93	4.96	-0.03
10.Say exactly when services will be done	5.00	5.00	0.00	4.97	4.91	0.06	4.98	4.95	0.03
11.Prompt services from employees	4.95	4.96	-0.01	4.89	4.88	0.01	4.92	4.92	0.00
12.Employees always willing to help	4.92	5.00	-0.08	4.97	4.89	0.08	4.94	4.94	0.00
13.Prompt response to clients requests	4.96	5.00	-0.04	4.86	4.89	-0.03	4.91	4.94	-0.03
14.Clients trust employees	4.99	5.00	-0.01	4.91	4.88	0.03	4.95	4.94	0.01
15.Clients feel safe with employees	5.00	5.00	0.00	4.94	4.88	0.06	4.97	4.94	0.03
16.Polite employees	4.96	4.99	-0.03	4.92	4.86	0.06	4.94	4.92	0.02
17.Employees well supported to work	4.66	4.94	-0.28	4.76	4.87	-0.11	4.71	4.90	-0.19
18.Clients get individual attention	4.96	4.96	0.00	4.80	4.79	0.01	4.88	4.87	0.01
19.Employees give personal attention	5.00	4.89	0.11	4.86	4.89	-0.03	4.93	4.89	0.04
20.Employees know clients' needs	4.80	4.96	-0.16	4.68	4.88	-0.20	4.74	4.92	-0.18
21.Have clients' interests at heart	4.83	5.00	-0.17	4.63	4.78	-0.15	4.73	4.89	-0.16
22.Convenient operating hours	4.85	5.00	-0.15	4.83	4.81	0.02	4.84	4.90	-0.06
<i>Totals</i>	<i>107.46</i>	<i>109.63</i>	<i>-2.18</i>	<i>106.67</i>	<i>107.54</i>	<i>-0.86</i>	<i>107.04</i>	<i>108.52</i>	<i>-1.48</i>
<i>Average</i>	<i>4.88</i>	<i>4.98</i>	<i>-0.09</i>	<i>4.84</i>	<i>4.88</i>	<i>-0.03</i>	<i>4.86</i>	<i>4.93</i>	<i>-0.06</i>

Figures in italics indicate negative P-E gaps, thus service quality gaps

Table 1: Client satisfaction with HIV/AIDS services.

STATEMENT	PUBLIC			PRIVATE			OVERALL		
	P	E	P - E	P	E	P - E	P	E	P - E
TANGIBLES									
<i>Totals</i>	19.09	19.95	-0.85	19.21	19.67	-0.45	19.15	19.81	-0.65
<i>Average</i>	4.77	4.98	-0.21	4.80	4.91	-0.11	4.78	4.95	-0.16
RELIABILITY									
<i>Totals</i>	24.48	24.97	-0.48	24.42	24.62	-0.20	24.45	24.80	-0.34
<i>Average</i>	4.89	4.99	-0.09	4.88	4.92	-0.04	4.89	4.96	-0.06
RESPONSIVENESS									
<i>Totals</i>	19.83	19.96	-0.12	19.69	19.57	0.11	19.76	19.77	0.00
<i>Average</i>	4.95	4.99	-0.03	4.92	4.89	0.02	4.94	4.94	0.00
ASSURANCE									
<i>Totals</i>	19.61	19.93	-0.31	19.53	19.50	0.03	19.57	19.71	-0.14
<i>Average</i>	4.90	4.98	-0.07	4.88	4.87	0.01	4.89	4.92	-0.03
EMPATHY									
<i>Totals</i>	24.46	24.81	-0.35	23.82	24.16	-0.34	24.14	24.49	-0.34
<i>Average</i>	4.89	4.96	-0.07	4.76	4.83	-0.06	4.82	4.89	-0.06
<i>Overall Total</i>	107.46	109.63	-2.18	106.67	107.54	-0.86	107.04	108.52	-1.48
<i>Overall Average</i>	4.88	4.98	-0.09	4.84	4.88	-0.03	4.86	4.93	-0.06

Figures in italics indicate negative P-E gaps, thus service quality gaps

Figures in bold indicate positive P-E gaps, thus satisfaction

Table 2: Client Satisfaction with the various dimensions of SERVQUAL.

-0.16 was the service gap. This dimension had the largest service gaps for either facility as well as overall, indicating that respondents were the least satisfied with it.

Reliability

Overall scores were 4.89, 4.96 and -0.06 for average perceptions, expectations and gap score respectively. Again, this showed dissatisfaction on all fronts.

Responsiveness

On the whole, the average perceptions and expectations had the same score of 4.94, leading to a service gap of 0. This dimension was the only one with two sets of positive scores and the only one where overall, respondents were satisfied with services received.

Assurance

Overall there was a negative gap score (-0.03), because of perceptions being at 4.89 and expectations at 4.92. Nonetheless, this was the lowest of the negative scores in comparison to other dimensions.

Empathy

Again, respondents showed that they were not satisfied with this dimension of HIV/AIDS care. Overall, they expressed dissatisfaction with this dimension as shown by the gap score of -0.06 (perceptions 4.82 and expectations 4.89).

Paired t-tests

Statistically significant differences were for the gap between average perceptions and average expectations were only realised for the two dimensions of tangibles and reliability. In addition, the overall gap difference was found to be statistically significant.

Discussion

The study revealed that client satisfaction with HIV/AIDS care in Kabale district, Uganda, is low. To our knowledge, no published literature is readily available about studies assessing client satisfaction

with HIV/AIDS care in a public and private facility using the SERVQUAL framework in the country. Nevertheless, Uganda is not the only country where clients are discontented with HIV/AIDS care, as shown in a study done in Ethiopia, evaluating the quality of HIV/AIDS clinical care in a referral hospital [20], and in Bangladesh [21].

For the dimensions measured, both facilities had service quality gaps, particularly with the tangibles dimension, which had the worst rating in both cases. This emphasises the need for improvement of the quality of this aspect. The public facility also scored low on the reliability dimension. Nonetheless in the current study, the responsiveness dimension got the best rating in both facilities, showing that clients were satisfied with it, especially in the private facility where there was a positive gap, as well as overall. All other dimensions had negative gaps overall. These findings may imply that the management of the facilities is not putting enough concentration and resources towards some aspects of service quality.

There are some instances of what is referred to as super-pleasing clients (in marketing). This is when the perception levels of the service are higher than the expectations [22], resulting in positive gap scores and showing good performance. Examples are the items "sympathetic and reassuring", "communicating exactly when services will be done", "prompt services from employees" and "employees always willing to help" for the private facility, and 'employees give personal attention' for the public facility.

Drug availability was important among respondents because some of them mentioned drug shortages as one of the problems they faced, while some refused to be interviewed because they had not got drugs for a while. These findings agree with those of another study in Uganda where users were dissatisfied with the inconsistent drug supply in government health facilities [19]. The stock-outs reported in both the public and private facilities reveal a major weakness in the quality of services because the importance of PLWHAs consistently taking their drugs – whether ARVs, cotrimoxazole prophylaxis (CP) or any other, cannot be over stated. Because of its effectiveness in preventing opportunistic infections, once PLWHAs start taking CP, it

should be done consistently and indefinitely. Ensuring an adequate and continuous drug supply is a key element for preventing and managing HIV drug resistance [23]. Similarly, ARVs are a life-long treatment and not adhering to the dose as required results in drug resistance. With efforts to scale up provision of ARVs to more PLWHA, the possible consequences of drug resistance such as treatment failure, increased direct and indirect health costs associated with the need to start more costly second-line treatment for patients, the spread of resistant strains of HIV and the need to develop new anti-HIV drugs cannot be ignored [24]. It is perilous to scale up HIV/AIDS care services and yet there are already drug shortages, and those in charge of planning and management need to note this urgently.

It is also alarming that there were drug shortages in these health facilities and yet some of the clients still reported satisfaction with services. Perhaps this could be due to ignorance about the seriousness of interruptions in taking drugs, or maybe the clients are resigned to their situation, since most of them are farmers who may not earn much money and cannot afford to buy these drugs regularly.

This study had strengths, like the big sample size and the high response rate of 96%.

Limitations included the fact that the study may have missed important information from some of the clients attending the private health facility because certain clients at this private site ensured that they only get ART from the director. Though we did not interview them, we still got good information from other clients. In addition, patients might have withheld information about their negative experiences and instead expressed satisfaction, and the study was cross-sectional, with its associated limitations. Furthermore, there is no mention of the availability of drugs in the SERVQUAL tool, which turned out to be important, and it did not explicitly define some issues like waiting time, which is crucial in client satisfaction. This may imply that using the SERVQUAL tool in its original form may not be the best thing for the Uganda setting, and probably other African countries that face similar problems. It may also not be appropriate for assessing HIV/AIDS care. Finally, the SERVQUAL tool that was used in this study had not been validated for use in Uganda, but since it was validated in other similar countries and different areas of health care, this challenge was seen as minimal.

Conclusion

Clients were not satisfied with the HIV/AIDS care they were receiving and in general, they identified problems in both health facilities for different aspects of care, especially in the areas of tangibles, which focused on up-to-date equipment, visually appealing facilities, well dressed employees and facilities matching the services they provide, which got the worst rating. In some cases, respondents' perceptions were higher than their expectations, meaning that the facilities performed well in these aspects, so not all the quality of care was perceived as poor.

The directors in charge of these two health facilities should be able to improve on the functional quality of the HIV/AIDS services they are offering, especially in the areas that were identified as weakest, which include physical facilities, equipment and appearance / presentation of personnel. The managers and staff of the two health facilities can identify problems from the patients' view point and make improvements. It is important to establish a system of regularly getting clients' feedback on different aspects of the services provided, in order to improve on them and serve clients better. Managers can also use the

results to study each others' strengths and assess those areas in which the other facility's patients showed satisfaction, especially if their own patients were dissatisfied.

It is crucial that the management of the facilities, district health staff and all those concerned with drug procurement and management study the circumstances and understand what causes this problem for Kabale district in particular. The district should then be supported to ensure a more constant and reliable drug supply for PLWHAS. Close supervision of drug management is also necessary and staff can be trained in better drug management. All this will help to avoid the rise of ART-resistant viruses and reduce morbidity and mortality.

Generally, people in charge of health and HIV/AIDS services in Kabale district can also learn that these are priority areas, which can be improved on when funds and other resources are available. Providing and managing HIV/AIDS care is a complex process, because people need life-long attention, counselling and monitoring so they can take their drugs consistently and correctly and live positively to avoid further problems. Therefore, health facilities that are the focal point of this care need to ensure that it is of good quality and satisfactory to clients.

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References

1. MOH (2009) Draft national health policy: Reducing poverty through promoting people's health. Government of Uganda, Ministry of Health.
2. MOH (2010) Health sector strategic plan iii 2010/11-2014/15. Government of Uganda, Ministry of Health.
3. UAC (2008) Ungass country progress report Uganda. Kampala, Uganda.
4. MOH (2008) Uganda service provision assessment survey 2007. Kampala, Uganda.
5. UAC (2007) National HIV & AIDS strategic plan 2007/8 - 2011/12. Uganda aids commission, Republic of Uganda.
6. Wagner G, Ryan G, Taylor S (2007) Formative evaluation of antiretroviral therapy scale-up efficiency in sub-Saharan Africa. *AIDS Patient Care STDS* 21: 871-888.
7. Babakus E, Mangold WG (1992) Adapting the SERVQUAL scale to hospital services: an empirical investigation. *Health Serv Res* 26: 767-786.
8. IOM (1999) Measuring the quality of health care. A Statement by The National Roundtable on Health Care Quality. National Academy Press, Washington, D.C
9. Parasuraman A, Zeithaml VA, Berry LL (1988) Servqual: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing* 64: 12-40.
10. Lochoro P (2004) Measuring patient satisfaction in ucmb health institutions. *Health Policy and Development* 2: 243-248.
11. Rapkin B, Weiss E, Chhabra R, Ryniker L, Patel S, et al. (2008) Beyond satisfaction: using the Dynamics of Care assessment to better understand patients' experiences in care. *Health Qual Life Outcomes* 6: 20.
12. Hall JA, Dornan MC (1988) Meta-analysis of satisfaction with medical care: description of research domain and analysis of overall satisfaction levels. *Soc Sci Med* 27: 637-644.
13. Whitworth J, Pickering H, Mulwanyi F, Ruberantwari A, Dolin P, et al. (1999) Determinants of attendance and patient satisfaction at eye clinics in south-western Uganda. *Health Policy Plan* 14: 77-81.
14. UBOS (2004) National service delivery survey.
15. Roberts KJ (2002) Physician-patient relationships, patient satisfaction, and antiretroviral medication Adherence among HIV-infected adults attending a public health clinic. *AIDS Patient Care STDS* 16: 43-50.

16. Bond S, Thomas LH (1992) Measuring patients' satisfaction with nursing care. *J Adv Nurs* 17: 52-63.
17. Lin DJ, Li YH, Pai JY, Sheu IC, Glen R, et al. (2009) Chronic kidney-disease screening service quality: questionnaire survey research evidence from Taichung City. *BMC Health Serv Res* 9: 239.
18. Lin HC, Xirasagar S, Laditka JN (2004) Patient perceptions of service quality in group versus solo practice clinics. *Int J Qual Health Care* 16: 437-445.
19. Jitta J, Arube-Wani J, Muyinda H (2008) Study of client satisfaction with health services in uganda.
20. Alemayehu YK, Bushen OY, Muluneh AT (2009) Evaluation of HIV/AIDS clinical care quality: the case of a referral hospital in North West Ethiopia. *Int J Qual Health Care* 21: 356-362.
21. Andaleeb SS (2000) Public and private hospitals in bangladesh: Service quality and predictors of hospital choice. *Health Policy Plan* 15: 95-102.
22. Palihawadana D, Barnes BR (2004) The measurement and management of service quality in dental healthcare. *Health Serv Manage Res* 17: 229-236.
23. Kresina TF, Lubran R, Clark HW, Cheever LW (2012) Substance Abuse Treatment, HIV/AIDS, and the Continuum of Response for People Who Inject Drugs. *Adv Prev Med* 2012: 541489.
24. <http://www.who.int/hiv/topics/drugresistance/en/index.html>