Client satisfaction determinants in four Kenyan slums

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Abstract

Purpose – In Kenya, gaps exist in health service provision to slum residents, especially service availability and access to quality care. There is also little information on the health status of people living in slums other than in Nairobi. The purpose of this paper is to generate evidence for use in designing interventions to improve health services in four mid-sized slums in Embu, Nyeri and Thika, Kenya.

Design/methodology/approach – A cross-sectional survey of clients receiving services in health facilities was conducted in the targeted slums. Data were collected through face-to-face interviews. Factor scores were generated using the Rasch model; simple and multivariate logistic regression analyses were done using the R statistical software.

Findings – Overall, 81 per cent of the 203 participants reported being satisfied with health services. Most clients (89 per cent) reported that health facility staff greeted them warmly; 82 per cent said their consultation was private. The facility type, waiting time and client experience with service providers determined their satisfaction ($p < 0.05$).

Practical implications – Healthcare managers can improve client satisfaction levels by understanding the client flow in their facilities and addressing causes of client dissatisfaction, such as long waiting times, while at the same time promoting facilitating factors.

Originality/value – The authors use latent variable modelling to compute client satisfaction scores, which were dichotomised into two categories and fitted into a logistic regression model to identify factors that influence client satisfaction. Health facility clients in the four slums are satisfied with services and have confidence the providers will serve them in a friendly and professional manner that promotes respect and quality care. The paper recommend healthcare managers in similar settings carry out client flow analysis and institute remedial measures to address long waiting times. Qualitative studies are recommended to determine the reasons behind the high satisfaction levels reported in this study.

Keywords Rasch model, Health services, Client satisfaction, Quality care, Slum, Service availability

Paper type Research paper

Introduction

Improving quality in health facilities is a strategy used in developing countries to reduce communicable diseases, which contributes significantly to efforts to attain millennium development goals (Girma *et al.*, 2008). Client satisfaction is an integral service-quality component that should be monitored closely by health service providers. A client is satisfied when his/her needs are met adequately when seeking healthcare services

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(Donabedian, 1992) and while client satisfaction has multiple dimensions, key ones include communication, respect, client-provider relationship, provider characteristics, health facility and physical environment (Sitzia and Wood, 1997). Evidence shows that client satisfaction varies by region, health facility and service delivery point within a facility. Tateke *et al.*, found that private hospital patients were more satisfied than those at the public hospitals. Satisfaction in public healthcare facilities was found to be associated with reasons for visiting and waiting time, while in private facilities, satisfaction was associated with consultation duration and visit type. In a study to quantify differences in family planning (FP) service quality at public and private providers in Tanzania, Ghana and Kenya, the investigators found FP client satisfaction was considerably higher in the private facilities. These differences were influenced by factors like shorter waiting times, methods and supplies (Hutchinson *et al.*, 2011). A study on women's maternity care satisfaction in a Nairobi slum reported that 56 per cent would recommend the facility to others and would deliver again at the same facility. Differences in satisfaction in the study depended on whether pregnancy was intended (women may be unhappy, concerned or ambivalent about an unintended pregnancy), provider empathy and facility type. Satisfaction was higher among patients who visited private facilities, compared to attending government facilities (Bazant and Koenig, 2009). A Saudi Arabia study showed that client satisfaction was associated with: the primary healthcare center building – whether it was purpose-built or rented; household head's literacy level; and primary healthcare utilization – regular or infrequent (Al Qatari and Haran, 1999). In comparison, Uganda researchers reported higher satisfaction among clients who had completed primary or secondary education compared to those with no education. Additionally, clients who paid $1.50 or more and those who waited more than two hours were less satisfied than those paying less or those reporting shorter wait times. Satisfaction predictors in the Uganda study were client's perception of their providers' technical competence and service accessibility, convenience and availability (Nabbuye-Sekandi and Makumbi, 2011). Satisfied clients have been found to be more likely to use health services, comply with medical treatment and continue with the healthcare providers. Nezenega *et al.* (2013) investigated patient satisfaction on tuberculosis treatment service and adherence to treatment in public health facilities in Ethiopia. Their findings showed among other factors, overall patient satisfaction was significantly associated with adherence to TB treatment. In another study, patient satisfaction with care influenced retention in HIV care and adherence to HAART (Dang *et al.*, 2013). Aljumah *et al.* (2014) found that treatment satisfaction scores among Saudi Arabia patients with major depressive disorders was positively correlated with adherence to antidepressants.

The Kenyan public health sector, like other developing countries, is plagued by uneven demand and negative service-quality perceptions. The situation is compounded by absent essential medications, long journeys to service delivery points and long wait times. Such factors play an important role in shaping clients' preconceived negative attitudes and dissatisfaction with healthcare services, providers and healthcare itself. In Kenya, most health service information from slum areas and residents' health status comes from Nairobi, the capital city (Nganda, 2002; Muwonge, 1980; African Population and Health Research Center, 2002; Oxfam, 2009; Bazant and Koenig, 2009). Information on health services provision in slums located in Kenya's small- to medium-sized towns is poor. Our study was designed to address this information gap and generate data to design appropriate interventions to improve health services in Embu, Nyeri and Thika.

Methods

Study design

This study focused on data from client exit interviews conducted for a large cross-sectional survey that also included interviewing healthcare providers and community members.

Study setting

The study took place in four slums in Thika, Nyeri and Embu, Kenya. These are medium-sized urban centers in the Kenya's central-eastern region with a combined 60,000 population (Kenya National Bureau of Statistics, 2009). According to the 2009 national population census, the two target slums in Embu (Shauri and Dallas) had 18,767 inhabitants; Kiandutu slum in Thika had 17,987 inhabitants; and Kiawara slum in Nyeri had 25,018 inhabitants. The APHIAplus Kamili project, funded by the US Agency for International Development, has supported interventions to strengthen health services in these towns since 2010.

Sampling and data collection

All 18 registered health facilities in the four slums were included in the study; seven are owned and managed by the government, the other 11 are privately owned and managed. Clients aged 15 years or older, who lived in the slum area and sought outpatient health services at participating facilities between September and November 2013, were included in the study. Using a 56 per cent proportion of satisfied patients, based on a previous study (Bazant and Koenig, 2009), together with a 5 per cent significance level (α), a 10 per cent precision and a 5 per cent non-response rate, the minimum sample size was 100 clients. A design effect of two, to account for variations within the health facilities in the three towns, gave a sample size of 200. In total, 12 research assistants underwent a three day training on research ethics, consent procedures, data collection tools, data storage and confidentiality. Health facility managers were notified through health ministry channels. The research assistants recruited clients leaving the service areas after they had received health services from the outpatient clinic, maternal and child health, FP, comprehensive care centers or specialized clinics (e.g. diabetes, orthopaedic and dental). Consent procedures and interviewing took place in areas where privacy was assured.

Variables of interest and ethical clearance

The data collection questionnaire used questions from the Kenya Demographic Health Survey (I.C.F. Macro and Kenya National Bureau of Statistics, 2010). The broad categories included clients' socio-demographic characteristics (age, education, marital status and residence), reasons for visiting the health facility, client's interactions with facility staff and client's satisfaction with services. To ensure accuracy, the questionnaire was translated from English to Kiswahili (local language). Ethical approval was obtained from the Johns Hopkins Bloomberg School of Public Health Institutional Review Board and the Kenya Medical Research Institute Ethical Review Committee. Oral informed consent and assent from participants aged 15-17 years with parental/guardian permission was sought before questionnaires were administered.

Client satisfaction (outcome)

Six questions measured clients' satisfaction levels, six used a Likert scale (three categories): agree (score = 1), undecided (0) and disagree (0). The questions were

related to willingness to come back again to the facility, willingness to recommend the facility to someone else, whether the client was provided with all the required information, whether s/he felt free to ask questions and was treated with respect. An additional question: whether respondent's health needs had been met was also included. Data reduction techniques summarized the observed satisfaction variables into a few dimensions through latent variable modelling using the ltm R package (Rizopoulos, 2006). Component internal consistency and reliability used for computing the satisfaction score were assessed by calculating Cronbach's α, which was found to be high (>0.7). Pairwise associations between seven items corresponding to the two-by-two contingency tables for all possible pairs were computed and variables with a low association with other items were dropped leaving five variables with Cronbach's α of 0.78. Factor scores were then generated by fitting a one parameter logistic model, also known as the Rasch model (Rasch, 1960). The scores had a bimodal negatively skewed distribution, suggesting that there were two groups. Respondents scoring less than zero were classified as not satisfied while those with more than zero meant satisfaction.

Clients' interactions with facility staff

Two questions were used to establish client's experience with their service provider by applying the Likert scale agree, undecided and disagree. Undecided and disagree responses were combined into a single disagree category and scored 0 while agree scored 1. The variables assessed included "staff greeted patients warmly" and "consultation was private."

Health facility factors

Data were collected on four factors related to the health facility and on client experiences while seeking services that might affect their satisfaction level: health facility type (private or public), total visits to the health facility, time taken to reach the health facility and time spent waiting to be served.

Data management and analysis

Data were entered in CsPro 4.0, cleaned and coded, then exported into the R statistical software for analysis (R Development Core Team, 2014). In the bivariate and multivariate logistic regressions analysis, a generalized estimating equations approach was used to fit marginal generalized linear models to clustered data. Variables that were significant in the bivariate model analysis were then fitted in a multivariate model to identify the most influential items, while controlling the demographic characteristics (age, education, marital status and town). Significance used throughout the analysis was 0.05.

Results

Study participants and facility visits

In total, 203 clients were interviewed; about three-quarters were female. Most had completed secondary and post-secondary school education (57 per cent); 41 per cent had completed primary school. Nearly two-thirds were married or in a union (59 per cent) and about half were from Embu, where two of the four slums are located. About three-quarters (76 per cent) had visited public health facilities and 24 per cent private health facilities. Table I summarizes the socio-demographic characteristics.

Characteristic	$n = 203$
Gender	
Male	55 (27.1%)
Female	148 (72.9%)
Age category	
15-24 years	59 (29.1%)
25-34 years	81 (39.9%)
35-44 years	41 (20.2%)
45+ years	11 (5.4%)
Missing	11 (5.4%)
Educational program	
No education	4 (2.0%)
Primary	84 (41.3%)
Secondary+	115 (56.7%)
Current marital status	
Unmarried	84 (41.4%)
Married/in union	119 (58.6%)
Town	
Embu	103 (50.8%)
Thika	50 (24.6%)
Nyeri	50 (24.6%)

Table I.
Study participants – socio-demographic characteristics

Clients' interface with health facilities

More than three-quarters (84 per cent) had visited the same facility more than once: 34 per cent three to four times; and 29 per cent five or more times. For time taken to reach the facility, about one third (33 per cent) spent ⩽20 minutes while 45 per cent spent 20-40 minutes travelling. Most clients reported waiting less than half an hour (39 per cent) to be seen by a provider (Table II). Nearly two-thirds interviewed had come for either general outpatient or maternal and child health services. When it came to client's experience with the service providers, most clients (89 per cent) reported that staff greeted them warmly and 82 per cent said their consultation was private.

Figure 1 shows how client satisfaction with services is distributed. The positive responses were over 90 per cent in all five dimensions measured, with 95 per cent expressing willingness to visit the health facility another time.

Table III shows the bivariate and multivariate analyses used to evaluate the factors associated with client satisfaction. Bivariate analysis showed that gender, education level, marital status, time taken to reach the facility and total visits are not significantly associated with client satisfaction (> 0.05). After controlling patients' age, gender, education and marital status in the multivariate analysis, attending a private health facility, short waiting time and being greeted warmly were found to be associated with high satisfaction ($p < 0.05$). Clients attending public facilities were 79 per cent less likely to be satisfied compared to those visiting private institutions. Satisfaction decreased with longer waiting times. Additionally, patients who said staff greeted them warmly and had a private consultation were more likely to be satisfied compared to those who disagreed (< 0.05).

Characteristic	$n = 203$
Managing authority of health facility	
Private	48 (23.6%)
Public	155 (76.4%)
Heath facility (MOH Classification)	
Tier 2	119 (58.6%)
Tier 3	84 (41.4%)
Visits per client to same facility in the last 12 months	
1-2	44 (21.6%)
3-4	68 (33.5%)
5+	59 (29.1%)
Missing	32 (15.8%)
Travel time to health facility (minutes)	
0-19	66 (32.5%)
20-39	91 (44.8%)
40-59	15 (7.4%)
60+	30 (14.8%)
Missing	1 (0.5%)
Waiting time (minutes)	
0-29	80 (39.4%)
30-59	28 (13.8%)
60-119	32 (15.8%)
120	62 (30.5%)
Missing	1 (0.5%)
Main reason for visiting health facility	
General outpatient	95 (46.8%)
Maternal child health	36 (17.7%)
Specialized clinics	27 (13.3%)
Other (HIV testing and counselling pharmacy, radiology, laboratory)	15 (8.9%)
Reproductive health	14 (6.9%)
Comprehensive care clinic	13 (6.4%)
Missing	3 (1.5%)

Table II.
Clients by health facility characteristics

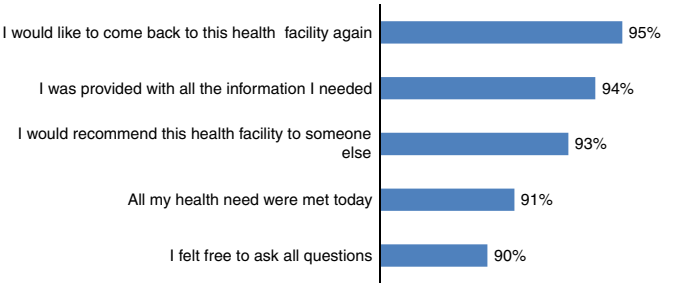

Figure 1.
Satisfaction with five dimensions in four Kenyan slums

Variable	Bivariate Odds ratio	95% CI	*p*-Value	Multivariate Odds ratio	95% CI	*p*-Value
Age[b]	0.03	[−0.00352, 0.0631]	0.080	0.03	[−0.00496, 0.0583]	0.098
Gender: male	0.80	[0.37, 1.72]	0.570	0.83	[0.44, 1.56]	0.567
Education: secondary level	1.18	[0.60, 2.33]	0.626	1.05	[0.47, 2.35]	0.909
Marital status	0.62	[0.31, 1.24]	0.120	0.73	[0.49, 1.10]	0.134
Facility type: private	2.31	[2.00, 2.66]	< 0.001	1.79	[1.33, 2.39]	< 0.001
Time to facility: more than 20 minutes	0.89	[0.34, 2.19]	0.800	–	–	–
No of visits to facility: visited once	0.23	[0.027, 1.98]	0.180	–	–	–
Waiting time (continuous)[b]	−0.002	[−0.00381, 0.000721]	0.004	−0.001	[−0.00154, −0.000366]	0.001
Greeted warmly[a]	4.35	[1.43, 13.20]	0.004	4.06	[1.83, 9.00]	< 0.001
Consultation done privacy[a]	1.79	[1.05, 3.06]	0.010	1.21	[0.83, 1.77]	0.330

Notes: [a]For staff attitude variables (greeting, privacy), disagree was used as a reference category; [b]continuous variables reporting log odds instead of the odds ratios

Table III. Bivariate and multivariate analysis: factors associated with client satisfaction

Discussion

This study reports much needed information on health services in slums from the clients' perspective. We investigated the health service attributes that affect client satisfaction and, by extension, that serve as a service quality proxy measure. Our findings provide valuable insights into delivering quality services in slums located in middle-sized towns: an area about which there is little information. We found that most residents in the four slums received health services primarily through the government-owned health facilities. Most spent less than 40 minutes travelling to access care, but waiting time is a major factor that is inversely related to their satisfaction. Clients receiving care from the few private health facilities spent less waiting time and reported a higher satisfaction level than public facility clients. These findings agree with an Ethiopian study (Tateke *et al.*, 2012) that satisfaction among patients attending private facilities, compared to their counterparts attending public health facilities, was higher. One possible explanation is that public facilities tend to be crowded and have fewer service providers, leading to longer waiting times. Also, though not directly assessed by this study, many government-owned health facilities had stock outs (medicines and supplies), which may have contributed to clients reporting lower satisfaction in public facilities (I.C.F. Macro and Kenya National Bureau of Statistics, 2011). About 40 per cent of Kenya's health facilities are owned and managed by non-governmental organizations (I.C.F. Macro and Kenya National Bureau of Statistics, 2011) and they tend to be better supplied and are less crowded, which may in part explain the higher satisfaction at private facilities. Studies show that clients are willing to travel longer distances to avoid long wait times in health facilities near where they reside and for perceived better services (Halwindi *et al.*, 2013; Creel *et al.*, 2002).

We also investigated the relationship between socio-demographic factors and satisfaction, but we did not find an association. However, other studies show that socio-demographic characteristics are associated with satisfaction (Danielsen

et al., 2010; Rahmqvist, 2001). A Ugandan study (Nabbuye-Sekandi and Makumbi, 2011) reported that satisfaction was higher among clients with a primary or secondary education compared to those with none. A Saudi Arabian study found that the household head's literacy level was directly correlated with client satisfaction (Al Qatari and Haran, 1999). It is possible that our study did not find similar relations because our study population was highly homogenous, consisting mostly of females aged 20-40 years, with 8-12 years schooling, all living in very similar conditions.

We found that high client satisfaction was associated with the friendly and understanding service providers. These attributes are modifiable factors that healthcare managers should consider as they are also overall care quality components. A service delivery point's good reputation often encourages users to return, which promotes access, utilization and service continuity (Creel *et al.*, 2002); health managers should therefore strive to ensure they maintain a good reputation and maintain the community's trust. It is conceivable that satisfied-client referrals are a powerful tool that can be used by health managers to promote access to quality health services for all, including the economically disadvantaged and under-served populations, such as slum dwellers. Public health facilities are at a disadvantage as they often serve clients who have to make do with what is available when patients do not have resources to seek care elsewhere.

Patient role is an important healing and recovery issue. Satisfied clients are likely to adhere to the advice and medications provided at the health facility (Donabedian, 1992; Bazant and Koenig, 2009). Thus, increasing client satisfaction can reduce morbidity, especially for prolonged and complicated conditions like tuberculosis, which is a common co-morbidity with HIV infection. This is especially important in Kenyan slums where HIV prevalence is reported to be at least twice the general population in Kenya (Madise *et al.*, 2012). Client satisfaction therefore goes beyond just benefiting the client, high satisfaction can lead to greater societal-benefits when major public health problems are addressed effectively and when healthcare delivery systems improve.

Limitations

This study has limitations that have a bearing on its generalizability. Client exit interviews were conducted in the health facilities, therefore, it is possible that informants may have been hesitant to criticize service providers and this may have contributed to the high satisfaction recorded. Although face-to-face interviews were structured, in-depth interrogation to understand the reasons behind the responses may have been beneficial. This study was designed to provide a snap-shot to inform the APHIAplus Kamili program, plan service delivery interventions and not to qualitatively analyze client satisfaction's underlying complexities.

Conclusion

We found that clients in four slums in Embu, Nyeri and Thika, Kenya, were satisfied with the health services and are confident that service providers will serve them in a friendly and professional manner that promotes respect and quality care. To address long waiting times, we recommend that managers in similar settings carry out client flow analysis and institute remedial measures that could shorten waiting times. Further qualitative studies are recommended to determine the reasons behind the high satisfaction reported in these urban areas.

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