

Access to Healthcare Services in Informal Settlement: Perspective of the Elderly in Kibera Slum Nairobi-Kenya

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Abstract

Background: The world's older population is increasing at an alarming rate. This comes up with several health problems and the preparedness of health facilities in handling the elderly is under investigated in Kibera urban informal settlement, Kenya. **Aim:** This study examined perceptions of the elderly on quality of care and fundamental factors to utilization of health services. **Subjects and Methods:** This was a descriptive cross-sectional study targeting the elderly, to identify factors influencing access to healthcare. Mixed Methods entailing qualitative and quantitative parameters and a multistage sampling approach were used. Quantitative data was analyzed using statistical package for social science. Manifest content analysis was used for qualitative data. **Results:** Access to healthcare is low 40.4% (161/399). Access was high among very satisfied {unadjusted OR 0.012, 95% CI (0.001-0.157)}, and satisfied {unadjusted OR 0.012, 95% CI (0.001-0.157)} respondents. Facility ($\chi^2=19.763$, $df=3$ $p<0.001$), health worker preference ($\chi^2=6.819$, $df=2$ $p=0.033$) and family support ($\chi^2=21.539$, $df=4$ $p<0.001$) influenced access. Respondents who preferred treatment by any health worker and those for same sex were less likely {unadjusted OR 2.701, 95% CI (1.022-7.136), p values =0.045 and OR 5.322, 95% CI (1.613-17.555), P value=0.006} to be associated with access. Access increased with satisfaction of service received. Those very satisfied {unadjusted OR 0.008, 95% CI (0.001-0.091), p value<0.001 and satisfied (OR 0.005, 95% CI (0.001-0.026), P value<0.001) were highly associated with access. **Conclusion:** Access to healthcare among the elderly in informal settlement is low. Availability and acceptability are major challenges. This calls for perception change among policy and health workers to elderly clients and qualitative research to ascertain the underlying reasons for low acceptability.

Keywords: Access, Healthcare, Elderly people

Introduction

The world's older population is increasing at an alarming speed.

^[1] The elderly is cohort five (60+) years. However, as this population grows their social and economic needs such as health care also scales up. The Access to health care by the elderly can be defined as the ability of the aged to get the required medical care from the health service providers when they need it. It's a comprehensive measurement of access to health care that requires a systematic assessment of physical, financial and socio-psychological access to services.^[2] These are further defined into three basic indicators: availability, affordability and acceptability. In 2005-2010, according to United Nations Population and Development, the global annual growth rate of the older population was 2.6% compared to 1.2 per cent of total population.^[3] Projections suggest that the annual net gain will continue to exceed 10 million over the next decade which is more than 850,000 each month.^[1] By 2025-2030, projections indicate that the population aged 60 or over will be growing about 4 times as rapidly as the total population, at an annual growth rate of 2.8% compared to 0.7 per cent for the total population.^[4] The trend is replicated in urban areas of less developed regions. For example, in 2005, more than half (51.5%) of the world's older

population lived in urban areas while in developing countries over one fourth of older persons (25%) lived in the urban areas.

^[4] In Kenya, the number of elderly people has grown rapidly from 385,000 in 1950 (World population prospects 2008), to about 1,396,125^[5] in 2010. With the current population growth rate of 2.6% annually the total elderly population by 2030 will be 3,473,000.^[4] Kibera an area characterized by lack of access to basic services, like the rest of Peri urban/slum areas in developing countries hosts' majority of the senior residents in Kenya.

Kenya with the rest of World adopted the Madrid International Plan of Action on Ageing, during the Second World Assembly. The Plan focuses on three priority areas: older persons and development; advancing health and well-being into old age;

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and ensuring enabling and supportive environments [6]. This was domesticated through National Health sector Strategic Plan 2 (2005-2012) and the draft Kenya health strategic and investment plan.^[2] Kenya health sector strategic and investment plan adopts a broader approach that entails moving from the emphasis on disease burden to the promotion of healthy life styles of individuals, with attention to the various stages in the human life cycle. The health services received by the elderly in Kenya today are part of the standard services provided for the all life cohort, without strategic attention to geriatric health requirements including physical, social and emotional needs. Whether the healthcare is prepared to take care of the elderly has not been extensively investigated.^[7,8] The available studies conducted in Kenya, South Africa and Pakistan respectively focused on finance, family support, physical inaccessibility of health service providers and trained health personnel has the major factors deterring older people from seeking healthcare services.^[9-11] However, limited studies have assessed acceptability and availability of services.^[12] This study examined perceptions of the elderly on quality of care and fundamental factors to utilization of health services.

Material and Methods

Study design

The study adopted a population based descriptive cross-sectional design and mixed method approach involving qualitative and quantitative methods. The study was conducted in Kibera sub county of Nairobi county, Kenya. Data was collected on the months of May-June 2013. Kibera is the largest slum in Nairobi, and the second largest urban slum in Africa. Its located 5 kilometers from the city centre. The 2009 Kenya Population and Housing Census reports Kibera's elderly population as 170,070.^[13] The respondents were mentally stable elderly men and had lived in Kibera slums for at least one year preceding the study.

Sampling procedure

Multi stage sampling method was applied to select participating units starting with division, locations then sub-locations. Fishers *et al.* formula guided the sample size.^[14] considering 95% confidence interval, a precision of 0.05 and proportion of interest of 50%. Systematic random sampling using sampling frame adopted from ministry of planning-Kibera office was used at household level to selected participating clients. A research team was trained and orientated on the study setting, objectives, procedures and research ethics including pre-testing. The study tools were pretested and revised appropriately.

Access is a broad term with different dimensions and many factors combine together to affect the access of health care service among individuals and communities. Whether people have access to healthcare services or not, is determined by their circumstances and environment. In this study, a composite variable (access) was developed from three WHO, service factors; availability, affordability and acceptability.^[6] Quantitative data was analyzed using IBM statistical package for the social sciences (SPSS) for Windows, Version 22.0.^[15] The results are reported descriptively and inferentially with an alpha value of 0.05. Manifest content analysis was used for

qualitative data by manually merging codes from key emerging issues to categories then themes from which conclusion and generalization were formulated reflecting the study objectives.

Research ethics

All codes of ethics and ethical review were observed in the process of protocol development, data collection and reporting. This included explaining the purpose and objective of the study to respondents before seeking written informed consent. The study protocol was approved by relevant legal authorities in Kenya-the national commission for science technology and innovation (NACOSTI) and Kenyatta university ethics research committee (ERC) participation was voluntary.

Results

The study results are derived from 399 respondents. Majority were male 57.4% (229/399), married 57.9% (231/399) educated 57.4% (229/399) while 7.8% (31/399) were still employed and only 3.5% (14/399) lived in a permanent house. The study established access rate of healthcare services among the elderly was 40.4% (161/399) as tabulated in Table 1. According to the respondents, the services are affordable 82.7% (330/399) but unavailable 89.0% (355/399) and unacceptable 59.9% (239/399).

The quantitative finding on availability and acceptability of services was corroborated by qualitative finding which found that there are no specific services tailored made for senior citizens. One KII informant candidly commented "*Well, as you know this is a general facility, we strive to serve all Kenyans subject to resources. There are no services specifically designed for the elderly but we serve them with great humility and decorum*". Another KII informant echoed this sentiments-*This is a public facility, my staff serve client uniformly however the elderly deserve unique services which are out of our scope and at same time desire services.* Aging is a tender process to which family support is crucial. In this study, rating of family support to seeking care was relative, 33.3% (133/399) of the respondents' attested to be poor while 31.6% (126/399) noted well. However, 14.0% (56/399), 12.0% (48/399) and 9.0% (36/399) were indifferent, very poor and excellent respectively. Level of family support was statistically significant in relation to access ($\chi^2=21.539$, $df=4$ $p<0.001$). Access was relative to satisfaction swing with return among very satisfied {unadjusted OR 0.012, 95% CI (0.001-0.157), and satisfied {unadjusted OR 0.012, 95% CI (0.001-0.157), compared with the indifferent and dissatisfied respondents. This results are tabulated in Table 2.

Majority of respondents 58.1% (232/399) did not seek advice while 24.1% (96/399), 14.8%, 59/399 and 3.0% (12/399) were

Table 1: Overall extent of access to healthcare by the elderly (n=399)

Indicators	Outcome in percentage %	
	Yes	No
Overall access to healthcare by the elderly	161 (40.4%)	238 (59.6%)
Service availability	44 (11.0%)	355 (89.0%)
Service affordability	330 (82.7%)	69 (17.3%)
Service acceptability	160 (40.1%)	239 (59.9%)

advised by children, spouse and neighbours/friends respectively. Healthcare advice was not statistically associated with access. Public health facility was the most preferred facility 60.2% (240/399), followed by private facility 23.8% (95/399), mission hospitals 10.8% (43/399), herbalist 4.3% (17/399) while a few respondents 1% (4/399) liked divines. Facility preference was statistically significantly associated with access ($\chi^2=19.763$, $df=3$ $p<0.001$). Similarly, preference of health worker was statistically significant ($\chi^2=6.819$, $df=2$ $p=0.033$) for example those who preferred to be serviced by a health worker of opposite sex affiliated with access. Alike result was reported in qualitative data. For example, one KII candidly commented.... "I don't understand but it does seem as you age you grow aligned to some options. Elderly people do not only choose the staff they prefer to attend them but may postpone services until when that staff is around and available". Respondents who preferred treatment by any health worker and those who opted for same sex were less likely {unadjusted OR 2.701, 95% CI (1.022-7.136), p values =0.045 and OR 5.322, 95% CI (1.613-17.555), P value=0.006} to be associated with access when compared with those who liked treatment by opposite sex as illustrated in Table 3.

Similar results were obtained from respondents' satisfaction with the health worker providing the services ($\chi^2=117.383$, $df=4$ $p<0.001$) however there was no statistical difference at multinomial level. Rating of received Health care services was poor, only 7.5% (30/399) were very satisfied, 32.8% (131/399) satisfied, 32.8% (131/399) dissatisfied, 17.3% (69/399) indifferent and 9.5% (38/399) strongly dissatisfied. Rating of health care services was significantly associated with access ($\chi^2=257.326$, $df=4$ $p<0.001$). Access increased with satisfaction of service received. Those very satisfied {unadjusted OR 0.008,

95% CI (0.001-0.091), p value <0.001 and satisfied (OR 0.005, 95% CI (0.001-0.026), P value <0.001) were highly associated with access compared with the indifferent respondents.

The world health report 2006: working together for health recognizes shortages of professional health workers as one of the key ingredients in the growing human resource crisis, particularly in low-income countries. The report advocates for a review and subsequent delegation of tasks to the "lowest" category who can perform them successfully and it is in this context that the concept of using community health workers (CHWs) was developed and implemented.^[7] A CHW is designed to provide basic health service such as promotive, preventive and simple curative services to the community. The current study aimed to assess the role of this group of health workers in facilitating basic health care services to the elderly. However, from qualitative data, the role of CHWs in supporting the elderly health wise is not as exposed by one KII who said "the role and contribution of CHWs cannot be overemphasized, since their enrolment we have witnessed tremendous changes in health indicators in this community. However, they have no clear defined role in provision of service to the elder". Majority of the respondents 68.6% (274/399) reported to have been served by CHWs and services by CHWs was significant ($\chi^2=9.092$, $df=2$ $p=0.011$) in relation to access. The odds of access increase among those not served by CHW Services (OR 4.467, 95% CI (1.164-17.146), $P <0.01$) and those served occasional (OR 3.757, 95% CI (1.096-12.878), P value = <0.01) when compared against those served regularly by CHWs as indicated in Table 4.

Discussion

The current study established that access of healthcare services by the elderly was low. This finding concurs with Antonio

Table 2: Rating of family support in relation access (n=399)

	Access to health care (n/%)			Multinomial analysis	
	Yes*	No*	Total+	OR (95% C.I.)	P value
Rating of family support					
Excellent	33 (91.7)	3 (8.3)	36 (9.0)	0.012(0.001-0.157)	<0.01
Very Good	65 (51.6)	61(48.4)	126(31.6)	0.217(0.047-0.989)	<0.01
Indifferent	15(26.8)	41(73.2)	133(33.3)	0.308(0.064-1.495)	<0.01
Poor	35 (26.3)	98(73.7)	48 (12.0)	0.284(0.047-1.719)	<0.01
Very poor	13 (27.1)	35(72.9)	56 (14.0)	Reference	

Abbreviations: n, total number of respondents; CI, confidence interval; * and + Column and row percentages respectively; OR, odds ratio; Significant odds ratio values (unadjusted) in bold.

Table 3: Health worker Preference and Satisfaction with h/care services (n=399)

	Access to health care n (%)			Multinomial analysis	
	Yes	No	Total	OR (95% C.I.)	P value
Gender h/worker preference					
None/any	128(41.6)	180(58.4)	308 (77.2)	3.660 (1.272-10.537)	<0.01
Same sex	21(29.6)	50 (70.4)	71 (17.8)	4.100 (1.298-12.953)	<0.01
Opposite sex	12(60.0)	8 (40.0)	20 (5.0)	Reference	
Satisfied with h/care services					
Very satisfied	28 (93.1)	2 (6.7)	30 (7.5)	0.008 (0.001-0.091)	<0.001
Satisfied	114 (87)	17 (13.0)	131 (32.8)	0.005 (0.001-0.026)	<0.001
Dissatisfied	9 (6.9)	122(93.1)	131 (32.8)	2.339 (0.527-10.383)	<0.01
Very dissatisfied	4 (10.5)	34 (89.5)	38 (9.8)	2.018 (0.288-14.122)	<0.01
Neither	6 (8.7)	63(91.3)	69 (17.3)	Reference	

Abbreviations: n, total number of respondents; CI, confidence interval; * and + Column and row percentages respectively; OR, odds ratio; Significant odds ratio values (unadjusted) in bold.

Table 4: Services by community health worker (CHWs) with access (n=399)

Institutional Factors	Accessible to health care services n (%)			Multinomial analysis	
	Yes	No	Total	OR (95% C.I.)	P value
Services by CHWs					
None	37 (29.6)	88 (70.4)	125(31.3)	4.467 (1.164-17.146)	<0.01
Sometimes	93 (44.3)	117 (55.7)	210(53.6)	3.757(1.096-12.878)	<0.01
Regularly	31 (48.4)	33 (51.6)	64 (16.0)	Reference	

Abbreviations: n, total number of respondents; CI, confidence interval; * and + Column and row percentages respectively; OR, odds ratio; Significant odds ratio values (unadjusted) in bold.

et al. in a study titled accessibility to health care facilities in Montreal and an application of relative accessibility indicators from the perspective of senior and non-senior residents who found that accessibility to health care in Montreal Island tends to be lower precisely among the seniors.^[16] This result may be attributed to several factors such as perception and theories. One theory is the hardiness theory. Bushy defines hardiness as the state of being hardy; a capacity for sustaining hardship and the capability of surviving under unfavorable conditions; courage; boldness; and audacity.^[17] It is known that elderly and rural people delay seeking healthcare, (hardiness theory); with the first onset of symptoms resulting in deteriorating condition by the time health care is eventually sought.^[18] This hardiness theory may account for a sicker population among the elderly, resulting in an increased risk of vulnerability for some elderly populations.^[19] In this study affordability was not a major challenge however acceptability and availability services were dare. The acceptability result may also be explained by the hardiness theory however the finding on availability alludes to shortage of health services within the study area.

Religion affiliation was statistical not significant in relation to access. This may be because the elderly tend to be more oriented in their beliefs and specific religious doctrines may not change their beliefs and perceptions on their health care seeking behaviours. Satisfaction of family support was significant. Statistical relationship was found between on seeking health care and access. There was positive association in relation to access from those who was very satisfied and satisfied while the converse was true. Support may provide mental psyche which in turn enhance once health care seeking behaviours. The source of healthcare advice was not statistically associated with access. This finding is similar with a study by Help age international in Ethiopia, of 2013, where they found that the elderly had alleged improper treatment by health personnel, shortage of qualified health personnel, shortage or non-availability of medicines and lack of laboratory services in some health facilities.^[20]

Respondents preferred facility was significantly associated with access. This finding resonate well with Higgs *et al.* in a quantitative and qualitative approaches in consumer's perspectives of health care study which found lack of comfort with providers as a major barrier to access of health care services.^[21] This finding also concurs with a study done by Help age international in Ethiopia, that State-owned health centres are the most frequently visited health institutions by older people.^[20] The most preferred facility was public health, this may because of free health facilities while free services Comfort may probably be the reason behind positive relation of those

who sought health care in mission and private hospitals with access.

Gender preference of health worker was associated with access. Respondents who preferred treatment by any gender and those who opted for same sex were less likely to be associated with access when compared with those who liked treatment by opposite sex. This pattern chimes with sharma *et al.* who suggested that among elderly persons, the physician's perception of male versus female patients could contribute to differences in hospitalization.^[22] Hospitalization may therefore be based not only on biological but also on social factors, as physicians perceive and treat male and female patients differently. This finding however contrasts with the perception that female doctors are said to be more sensitive to women's problems than male doctors^[23] and female physicians are more likely to see female patients.^[24]

Satisfaction of provided health care services was significantly associated with access. This result agrees with the statement that satisfaction with provider services may impact perceptions of access to health care and clinical outcomes.^[25] Satisfaction of healthcare services could be because user services likeability may be influenced by a combination of system, provider and receiver variables such as waiting time, aesthetic value and charges. Similar results were obtained from respondents' satisfaction with the health worker providing the services. There was consistent downward trend of access with the most occurring from those who were very satisfied and the least from the very dissatisfied. These findings agrees with Denson and Mahipal who revealed that an elderly person's perception of the physician's lack of responsiveness was a greater disincentive to seeking care than more tangible barriers.^[26] Issues of trust have been documented in other studies. A qualitative study of Angina found that patients felt physicians were busy and that patients did not like to bother them with their own conditions.^[5] Lack of satisfaction has also been found to be associated with more symptoms and lower medication compliance in patients,^[27] whereas greater satisfaction has been associated with better outcomes.^[28] Interpretation of the study finding suggests that the psychological impact of perceptions of about the provider may translate into barriers for seeking future health care.

Visit and Services by CHWs was significant in relation to access. Most of those served regularly were associated with access than those served occasionally. This is shows that services at level one are among important factors that interact to facilitate use of health care services. This is consistent with a statement that quality services, the perception of the provider, and the past

experience with the health care provider influence access and acceptability of health care services.^[29]

Conclusion

This study has highlighted the low access to health care services among the elderly in informal settlement. Availability and acceptability are major challenge to access of healthcare services. Socio-cultural factors such as family support, preference of health facility and of health worker influence access. Satisfaction of facility services and of health worker providing the services are important to access of care by the elderly. This calls for perception change among policy and health workers to elderly clients. The proportion of services acceptability was low, there is therefore need to undertake a qualitative research to ascertain the under lying reasons.

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Conflicts of interest

The authors hereby declare that we have no conflicts of interest

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