

Environmental and Housing Problems of Low-Income Households in Eldoret Municipality, Kenya

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Abstract

This paper is based on research conducted in Eldoret Municipality among low-income estates, namely Langas, Huruma and Kamukunji. The main objectives were; to identify the health, environmental and housing problems; to examine government housing policy in relation to low-income housing. The results revealed that low-income housing impacted negatively on human health and the environment. Health problems identified include malaria, typhoid and cholera; Environmental problems include congestion, house pests, poor drainage, wastewater, air pollution and garbage. The results shows government policy is inadequate and mechanisms for enforcement are lacking, thus responsible for the housing problems of low-income groups. Government policies on low-income housing need to be reviewed to properly address the current situations by using cheap, affordable and locally available building materials. To improve the housing situation and alleviate the health and environmental problems associated with it, it is suggested that Eldoret municipal council should work closely with property developers to ensure that the necessary facilities and environmental infrastructure, such as piped water and sanitation, collection and disposal of waste, are provided. Furthermore there is need to promote the development of low-cost housing produced using locally available materials, in particular the use of soil bricks and prefabrication within the municipality.

Keywords: health, housing policy, sanitation, slums

INTRODUCTION

The right to decent housing is a Human Right that was recognized in 1948 in the Universal Declaration of Human Rights, and affirmed at the Vancouver Declaration on Human Settlement in 1976. However, all over the world experience has shown time and again that the realization of this right is difficult. As so far experienced both in and outside Africa, easy, ready-made and generally applicable solutions of this many-sided problem are not available (Syagga, 1987). It is estimated that one-fifth of the world's population does not have adequate shelter whatsoever, while more than a million people, mainly children, die daily because of lack of adequate housing, and majority of these are found in the developing world. Many scholars argue that it is difficult to make uniform criteria for adequate housing throughout the world but some general norms are: legal security of tenure, availability of services and infrastructure, affordability, habitability, accessibility, location and cultural adequacy.

The rapid growth in cities has been accompanied by a rapid growth in the number of urban inhabitants who live in sub-standard and overcrowded conditions. The figures from developing countries show that town dwellers represent an average of thirty to sixty percent of the urban population. At present it is

estimated that over fifty percent of the urban population live in extreme poverty, with this figure rising to as high as 79 percent in some cities. Half of the current urban population is of low-income, and over one billion urban dwellers have been counted among the urban poor (Moser & Satterthwaite, 1985).

Over the last three decades, most official housing programs in developing countries would have failed to reach considerable portions of this group, especially households in the lower twenty to forty percent of population. The search for solutions to the problem of providing low-income housing therefore continues to occupy the attention of National governments, International agencies and organizations within the voluntary sector. The problem has become particularly alarming with the rapid growth of low-income populations in cities and towns (Obudho & Mhanga, 1988).

The government of Kenya views the problem of housing in the light of its basic belief that "well planned housing and reasonable standards, when combined with essential services, affords dignity, a sense of security and proper status in society for the individual (Kenya Republic, 1990). However over eight million Kenyans live in shelters unfit for human

habitation or live in badly constructed houses and structures that serve as shelter.

The housing situation in Eldoret is not different from that of other urban centres. The demand for residential housing has grown faster than the supply leading to increased prices of land and house-rent and to over-crowded housing. Rapid industrialization and population growth has resulted in the development of informal, semi-permanent structures being occupied by the low-income groups as houses. About half of the population in Eldoret lives in these structures, which are unplanned, with high-density and inadequately serviced. The study therefore was undertaken with the purpose to identify health, environmental and housing problems facing low-income households; to examine the government housing policy related to these structures and to further suggest ways to improve low-income housing.

MATERIALS AND METHODS

The research area was in Eldoret municipality, located in the high – agricultural potential highlands of Uasin Gishu District in Rift Valley province. The town is traversed by latitude 0° 31’ North and Longitude 35° 16’ East and lies at an average altitude of 2085 metres above sea level. The land within the municipality rises from River Sosiani valley from about 1800 metres to 2200 metres forming a steep slope. Eldoret is the main urban centre in Uasin Gishu District and had a population of 290, 454 in 2001. Due to high altitude, temperatures are relatively low and humidity is moderate. Rainfall averages 1150mm annually. The study was carried out in three low income residential areas namely; Langas, Huruma and Kamukunji. Sampling was done in three stages: first was to randomly select the three slums out of five and sub-divide each slum into three clusters followed by randomization, utilized to pick one cluster in each slum. The second stage was the selection of households, whereby systematic sampling was applied, picking every tenth household for response. The respondent in each household was the head or his/her spouse aged between 25-60 years old. The total sample was 230 and included both male- and female-headed households. Both open and closed-ended questionnaires were used to collect primary data whereas participant observation was used to observe minute environmental and housing problems. The data was analyzed using Statistical Package for Social Science (SPSS). Data was reported using frequency tables and percentage graphs.

RESULTS

Demographic and Socio-economic status of low income households. Data on the number of households sharing one compound (size 100 x 25 feet) showed an average of 24% shared between 1-5 households (single rooms size 8 x 9 feet); 30% shared

between 6-10 households; 31% shared between 11-15 households; 3% had 16-20 households and 12% had above 20 households. On the number of people in a household (single room), data showed 54% had 1-5 people; 18% had 6-10 people, whereas 28% had above ten people. Figures 1, 2, and 3 show the education levels, occupation types and income levels of the respondents. From the data, 54% of the respondents had primary education; 20% had no formal education, whereas 22 % had secondary education. On occupation, data showed 43% were in business (informal small-scale business); 19% had no form of occupation and 11% were involved in formal employment. Data on income showed 33% had no source of income; 32 earned below Ksh. 900 per month; 10% earned between Ksh. 900-1900; 13% earned between Ksh. 2000-3000 and 12% earned more than Ksh. 3000. These results implied that low-income households were less educated and had poorly paid occupations that made it difficult for them to meet their basic need of decent shelters.

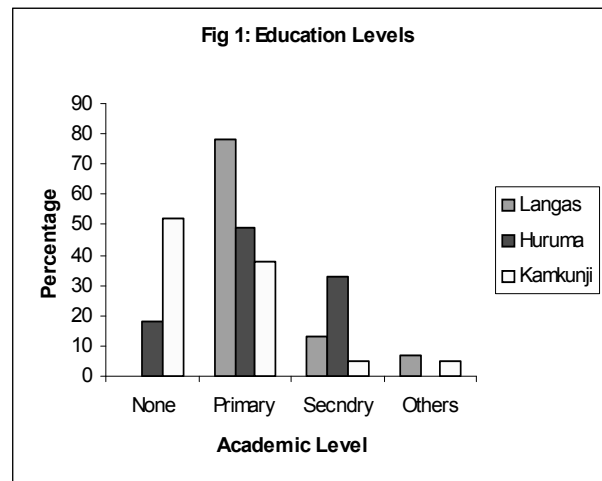


Figure 1. Education level of the Respondent
Source: Researcher 2009

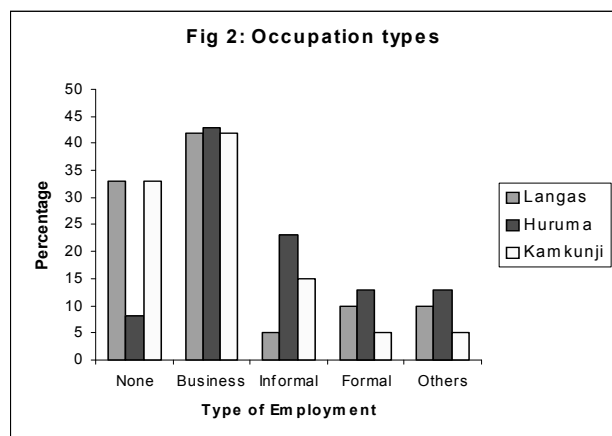


Figure 2. Types of Employment
Source: Researcher 2009

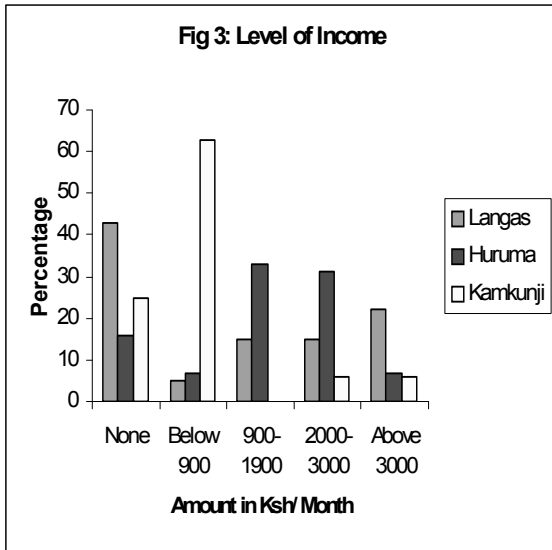


Figure 3. Level of Income
Source: Field research 2009

On the type of houses occupied by low-income households per number of rooms, data showed 55% occupied single rooms; 29% occupied two rooms; 13% occupied three rooms and 12% occupied four rooms. However 46% of respondents preferred two rooms and 18% preferred three rooms. Data was analyzed on the number of households sharing one pit latrine and one bathroom (semi-permanent structures constructed of wood or iron sheets) and results showed 40% shared between 6-10 households; 31% shared between 11-15 households; 19% shared between 1-5 households and 2% had no toilet facility. Fifty one percent (51%) of respondents’ shared one bathroom amongst 6-10 households; 13% shared amongst more than twenty households; 12% shared amongst 1-5 households and 4% had no bathroom facility.

Table 1 shows household, environmental and diseases that affect low-income households. Congestion, indoor pollution and house pests are the major problems affecting residents ranging from 60% to 74%.

Table 1: Household problems identified by respondents (in percentages)

Problem	Affected	Not Affected	No response
Congestion	70	18	12
Indoor pollution	74	8	18
Lack privacy	62	38	0
Lack ventilation	54	24	22
Noise	52	38	10
House pests	60	20	20
Insecurity	51	41	8
Crimes	44	48	8
Leaking roofs/floors	42	48	10
Coldness	33	66	1

Source: Cheserek (2009)

Table 2 shows garbage, solid and liquid waste, poor drainage, water pollution and air pollution are the major environmental problems ranging from 63% to 84%.

Table 2: Environmental problems identified by respondents (in percentages)

Problem	Affected	Not Affected	No Response
Garbage/Solid Waste	84	9	7
Poor Drainage	84	8	8
Water Pollution	66	24	10
Air Pollution	62	18	20
Liquid Waste	63	26	11
Floods	44	47	9

Source: Cheserek (2009)

Table 3 indicates malaria, fever, cough and typhoid are the major diseases affecting low-income residents in low-income households ranging from 65% to 90%.

Table 3: Diseases identified by respondents (in percentages)

Disease	Affected	Not Affected	No Response
Malaria	90	5	5
Malaria/Fever	80	15	5
Cough/Chest Pain	75	15	10
Typhoid	65	30	5
Diarrhea	52	41	7
Cholera	45	42	13
Eye Infection	42	39	19
AIDS	40	40	20

Source: Cheserek (2009)

DISCUSSIONS

The above figures show that compounds and households are crowded, thus raising the problem of congestion and indoor pollution in housing, further leading to high incidences of cough/chest pain and eye infections. On aggregate, compounds in Kamukunji are more congested than Langas and Huruma due to long structures built back-to-back or facing each other and relatively cheaper rents. Langas and Huruma had mixed structures of long and square shaped. Results further indicate that over half of households in low-income estates had a population of 1-5 people with a substantial number having 6-10 people living in a single room. In Kamukunji, most respondents live with extended families, so that children provide for their parents, while grandparents take care of younger children. It is evident therefore that there is congestion within the house in low-income settlements in Eldoret municipality.

The results show majority of low-income groups reside in slum areas due to poverty and partly as a result of low educational achievement that cannot enable them to obtain high-income jobs. This has influenced the education of their children as most respondents struggled only to provide for basic needs of food, clothing and shelter; more than half of the respondents in Kamukunji are illiterate comprising mainly of the elderly people and women whereas in

Huruma most respondents had some education (primary and secondary) and were involved in formal employment at Rai ply factory (refer Fig 1). This implies that low-income groups live near their work place to save on transport costs. The respondents without occupation were mainly housewives, whereas those dealing with business were mainly selling vegetables and foodstuff or running food canteens. However, it should be noted that housewifing is not considered an occupation thus, no income was paid for it. These results agree with what Wanyonyi (1996) concludes that the low-income earners are found in the informal sector employed as mechanics in *jua kali* workshops and selling food and vegetables in the open-air markets. Those with formal employment were watchmen, security personnel and nursery school teachers, earning little and unstable salaries.

Respondents with no income were mainly housewives and the elderly who were provided for by their husbands and children respectively. Those earning more than Ksh. 3000 were landlords, living in their own plots with some rental rooms. In Kamukunji 63% of respondents earn below Ksh. 900, consisting mainly of single women involved in vegetable and food selling.

On houses occupied by low-income groups, results showed over half occupied single rooms. This is explained by the low-income earned and unstable sources of income. Forty-six percent (46%) respondents preferred two rooms but could not afford the rents, those preferring single room were respondents with one or two children. Half the respondents paid rents ranging from Ksh. 350–1000 per month. These results imply the respondents were overcharged since the rents tribunal stipulates such rooms should be charged between Ksh. 150–250 per month. Eighty percent (80%) of the rooms were made of iron sheet, mud walls and earth floor. These materials are cheap to buy and easy to use and yet they are prone to weather conditions of floods, cold at night and hot during the day. These drastic changes in room temperatures affected the health of respondents negatively leading to diseases of cough and chest pain.

The low-income groups obtained their water from boreholes (43%), private tap (18%), communal tap (25%), and other sources (14%). The boreholes in Huruma and Langas are sunk in unhealthy environments such as between households or near collapsed pit latrines. This resulted in the contamination of water sources, thus leading to diseases such as typhoid, cholera and diarrhoea. In Kamukunji, all residents paid for their water (between Ksh. 100-350 per month) obtained through communal taps (municipal water kiosks) and water vendors. This agrees with the findings that indicate

low-income groups pay more for water (Satterhwaite et.al., 1985) and, due to insufficient incomes, resort to other sources of water that are unsafe for drinking.

The study established that 96% of the residents use pit latrines, and over 40% share one pit facility among 6 to 10 households, with 31% sharing among 11 to 15 households, and 2% without a toilet facility. This implies congestion in the use of pit latrines, which would make them fill up within a short period. In Kamukunji, 96% of respondents shared one bathroom between 6 to 10 households. This crowding in the utilization of bathroom led respondents to shower outside their rooms at night or inside their rooms. These meant respondents could shower inside their rooms and clean it instead of using the shared bathroom facility. The so-called pit latrines and bathrooms are temporary structures made of plastic paper, tins and wood; without doors or roofs in dilapidated state, as one could easily see human faeces on the toilet and bathroom floors. The poor state of pit latrines and bathing facilities explained the presence of diseases related to poor hygiene, with children being the most affected (51%); followed by women (35%) who spend most of their time in and around the house. Least affected are men (14%), because they working outside their residences. Respondent's suggestions to alleviate these problems were for landlords to build rooms, toilets and bathrooms of permanent materials and increase their number to reduce congestion, particularly in toilets and bathrooms.

Table 2 shows environmental problems of liquid waste, garbage, poor drainage and other problems identified by the respondents. These environmental problems lead to malaria and fever among respondents as they provide convenient breeding grounds for mosquitoes and other vector carrying insects. This problem could be resolved through cooperation between tenants, landlords and municipal council to construct proper drainage and collect all garbage appropriately. These findings agree with Smoke (1991) who attributed the inability of local authorities to provide services to its residents as due to lack of finances availed to them by the central government. This same view is held by Akivanga et. al. (1988) who asserts that because of dwindling finances, the local authorities' provision of basic services might not improve for a long time. This is because of the missing linkage and involvement of the local communities in housing, water and sanitation projects which is a key to any success. These communities must not only be taught, but they must also be consulted on what type of system best suits their local conditions. Eldoret municipal councils should recognize the role played by informal waste collection, and try to integrate them into formal urban waste collection economy to minimize health and safety risks associated with uncollected waste.

The municipal council should give incentives to residents to minimize waste production and generation (especially) among high and middle-income groups and introduce waste reduction and increase recycling projects. These findings, however, deviate from Lewis (1965), who proposed that only 20% of the urban poor actually have the culture of poverty, implying 80% fall into the category of those whose poverty results from infrastructural and structural conditions. In Eldoret 50% of the urban poor was a result of culture of poverty (that means poor parents beget poor children), whereas 50% is a result of lack of infrastructure and structures such as housing. The improvement of incomes, infrastructure and housing conditions will therefore reduce urban poverty and alleviate housing and environmental problems. The respondents need to be educated or made aware of the benefits of personal hygiene and environmental quality. They should be enlightened to value themselves and to achieve value for their money spent on housing and other services.

In Kenya there is no coherent and up-to-date housing policy in Kenya to guide development plans and programmes, particularly for the low-income groups. The government housing policy of 1968 (sessional paper no. 6); the government's response to low-income settlements has been frequent demolitions and seeking to build conventional housing units rather than assist the self-help process. According to the building code, an acceptable house must have two rooms, a kitchen, a toilet and a shower and covering not less than 38.5 sq metres and built with conventional and durable materials. Despite this, current housing in urban areas is deplorable with most housing failing to meet minimum standards of durability, sanitation and space, particularly in low-income residences. In 1970-75, between 33% and 61% of the National Housing Corporation funds were targeted at site-and-service schemes, that later benefited high-income and middle-income excluding the low-income groups. The lack of an explicit rental housing policy is a major weakness and loophole that landlords exploit and is harmful to investments. Remedies to low-income housing should include availability of land at affordable prices for all, availability of finances to construct houses through affordable and flexible loan services and decentralization of building materials to reduce costs. The use of soil blocks and prefabs should be accepted in constructing houses, particularly within the municipality. Modalities for policy review on low cost housing should be introduced and implemented to ease housing problems, particularly for the low-income groups.

CONCLUSION AND RECOMMENDATIONS

This paper has shown the link between low-income housing which lack basic social amenities leads to environmental problems thus leading to health

problems to the residents. Low-income residents need to be educated on and be made aware of the benefits of personal hygiene and environmental quality in maintaining good health. They should be enlightened to put value for their money spent on housing and other services. There is need to recognize informal waste collectors and to integrate them in urban waste management. Separation of waste should be done at the household level and incentives to be introduced to minimize waste production and generation. Reducing waste and recycling should be integrated in urban settlement plans within municipal council housing and privately developed housing. Eldoret municipality should tolerate alternative building materials such as soil blocks in the formulation and implementation of the urban building code by-laws.

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