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## The Influence of Demographic Factors in Access to Public Health Care in Kenya: A Case of Nairobi County, Kenya

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### **Abstract:**

*Access to public healthcare in Nairobi County is unequal among social classes. Lower social classes have worse healthcare than either the upper or the middle classes. These health inequalities are correlated with socio-economic inequalities. The higher socio-economic classes have better access to healthcare than the lower socio-economic classes. Higher incomes, education, employment and wealth result in better health of the households in the County. Unequal access to healthcare contributes to disparities in health status, increases costs for both the insured and the uninsured. Lack of access to healthcare reduces disposable incomes, particularly burdening the lower income households. These households cannot afford the care they need. This has forced them to forego such care altogether. The objectives of the study were three, namely: to evaluate the influence of demographic variables in access to public healthcare, to evaluate the influence of socio-cultural factors in access to public health care, and to evaluate the influence of institutional factors in access to public healthcare. The study used descriptive design, specifically, cross-sectional design for collection, measurements and analysis of data. The study took place in Nairobi County. The target population was households living in Nairobi County, where the sample was drawn from. The sampling techniques included multi-stage random sampling, random sampling, stratified random sampling, cluster random sampling, convenient sampling and purposive sampling. The sample size was obtained using Chadha's formula (2006) to arrive at 1066 sample size. Data collection instruments included observations, face-to-face interviews, questionnaires, in-depth interviews and focus group discussions. Qualitative data was analyzed thematically but quantitative data was analyzed using descriptive statistics. Data was analyzed using SPSS version 23. The results show that there were positive correlations between independent and dependent variables. The P-value was statistically significant. The results were not due to random chance and that  $P-0.01 < 0.05$  and this confirms a positive relationships between the variables. The relationships were mutually inclusive and highly correlated. On that basis, the null hypotheses were rejected and the alternate hypotheses accepted. The results show that demographic (disposing), socio-cultural (need) factors influence access to healthcare. Socio-economic factors should be addressed to benefit all the households. Socio-cultural factors should be distributed fairly among the households. Health systems should be improved and adequately financed to provide the requisite resources to all the households.*

**Keywords:** Social class, Access to healthcare, Health inequalities and Socio-economic status

### **1. Introduction**

Access to healthcare among the various social groups is unequal in both developed and developing countries. In the United States, access to healthcare is unequal among families with different socio-economic backgrounds. For example, low income families have less access to healthcare, and this explains why they have high infant mortality rates compared to families of high incomes (Kitagawa, E. et al. 1973). Evidence also show that African Americans, Red Indians and Hispanics have less access to healthcare due to their racial backgrounds compared to the majority whites (ibid). Socio-economic and racial factors play a key role in the distribution of access to healthcare.

In France, access to healthcare for manual workers is less compared to professional workers (Andersen R. 1979). Professional workers have better socio-economic resources, defined by income, occupation and education, which positively influence access to healthcare. The manual workers have less of these socio-economic resources, hence, the reason for not having good access to healthcare. In this case, occupation or employment statuses have some influence on access to healthcare.

In Canada, low income population has less access to healthcare compare to middle or high income population (Ibid). As a result of this health differences, life expectancy is lower among the lower income households compared with the higher income households (Wilkins R. 1976). Income in this case appears to have an important influence on access to healthcare. Households with high incomes can purchase healthcare services at private or specialized outlets. But those with less income have limited options and this limits their access to healthcare.

In another study, evidence show that Eskimos have less access to healthcare, due to their origin status, compared to the native Australians (Pampalon R. 1976). Originality status appears to affect access to healthcare. In this study, the native Australians have better advantages over the non-population. The evidence suggests that the non-locals are discriminated against and do not access equal resources and opportunities like the locals. Origin and discrimination therefore appear to be important factors in this study.

Like in the previous publications, low income continues to be an important factor. In Britain, low income population has less access to healthcare compared to the higher income populations (Donabedian A, 1980). Income includes wages, salaries, rents, pensions and gratuities among others affect access to healthcare. Those with high incomes have capacities to procure healthcare at all costs. Those with less income have less opportunities or resources to access healthcare.

The studies above show that access to healthcare was unequal among social classes. Socio-economic and cultural factors are distributed unequally and the upper social hierarchies have better access to healthcare, compared to the lower social classes. Health inequality persists despite the fact that these are developed countries with advanced health system. These gaps need further researcher and proportionate policy interventions.

In some Sub-Saharan countries, access to healthcare is still common despite numerous research and policy interventions (Vargas-Bar, et al. 2004). The World Bank shows that 50% of African population has access to modern facilities, and more than 40% do not even access clean water and sanitation. Immunization has not covered the entire population. This has resulted in high levels of maternal and infant mortalities, despite adequate human and material resources at their disposal (World Bank, 2006).

Access to healthcare among poor Tanzanians is poor compared to the wealthy. This is more pronounced in rural areas, where incomes, education, employment is low compared to the urban areas (Schellen, A. et al. 2003). In Uganda, access to healthcare is adversely affected because of poor health systems-poor hospitals, lack of equipment, low staff capacities leading to high infant mortality rates (Donabedian A. 1990). The low socio-economic class population have limited options compared to the upper and middle class who can afford health insurance cover and use of private facilities (Brawley M. 2000).

Like the developed world, selected Sub-Saharan Africa provides limited access to healthcare for its population. Sub-Saharan Africa is endowed with many natural and human resources, and yet access to healthcare is still a major problem. Socio-economic, socio-cultural and institutional disparities continue to influence access to healthcare. Resources have been expended on health systems, but access to healthcare remains a significant challenge. These countries continue with further research and policy interventions to try to provide access to healthcare to the entire population.

Access to healthcare in Kenya is delivered by Government, Non-Governmental organizations and the private sector. The government runs 41%, the Non-governmental organizations 15%, and the private business 43% (GOK, 2010). The Government owns most of the hospitals, health centers and dispensaries. However, clinics and nursing homes are managed by the private sector. Access to healthcare is provided through a network of over 5,000 health facilities countrywide (GOK, 2011). These facilities include the national referral hospitals, county referral hospitals, district and sub-districts, health centers and dispensaries. National referral hospitals are at the top, and they provide complex healthcare services. Kenyatta National Hospital and Moi Referral Hospital lead in providing highly complex healthcare services. However, private hospitals like Nairobi Hospital, Aga Khan and many more others are the equivalent and provide highly sophisticated technology and top qualified personnel (Wanjau, K. et al. 2012). County referral hospitals, district and sub-districts provide less but important health services. At the bottom are the health centers and dispensaries that provide others services, especially primary healthcare (GOK, 2014). The minority of the population access healthcare through the use of traditional specialists (spiritual healers, bone setters, and herbalists) (GOK, 2011).

Access to healthcare is important for all persons in the population. It increases physical, social and mental health of the individual; it improves the quality of life (IOM, 1993). Access to healthcare is important in promoting and maintaining good health; it helps manage and reduce unnecessary diseases. It also prevents early death besides achieving health equity among the population. Access to healthcare is therefore imperative in order to achieve good health and equity for the whole population (IOM, 1993). Access here includes coverage (Durham J. et al. 1998), services (Starfield B. et al. 2009), and timeliness (Brotherton SE, et al. 2005).

In this thesis, three factors are discussed to determine their influences in access to healthcare among the households in Nairobi County, using Andersen model (Andersen, R. 1968). These include demographic (disposing) age, gender, income, education, wealth, place of residence and marital status; socio-cultural factors (need) which are culture, values, habits, race, ethnicity, language, social cohesion and social resources/capital amongst others; and institutional (enabling) factors that include policies, governance, infrastructure, health facilities, health financing, insurance and health personnel. The goal is to increase access to healthcare and the objectives are to show the influence of these factors on access to healthcare.

This study focuses on access to healthcare in Nairobi County. The results show that access to healthcare is unequal among the households. Only a small number of households' access healthcare but the majority go without adequate access or no access at all. The majority is the lower socio-economic classes, who have less or no opportunities to access

healthcare resources compared to the upper and middle classes. These limitations to access have negative effects on the health and potential of the households affected. This is the knowledge gap that the study attempted to fill. A further research is necessary to fill the gap. Policy makers also need to address all these dimensions including, material (socio-economic), cultural (social resources/capital) factors and institutional that affect access to healthcare.

The study will use both qualitative and quantitative data for objective two, one and three respectfully. Descriptive design is used to conduct the research. Data collections will use various methods that include sampling techniques such as multistage random sampling, convenient and cluster random sampling. Collections instruments include in-depth interviews and focus group discussion for objective two, and interviews, key informant interviews, and questionnaires for objective one and three. Descriptive statistics are used to analyze and interpret data. Using SPSS, version 23, the results are analyzed and statistical information provided. The objective of the analysis is to find out the relationships between the variables-independent variables and dependent variables. The analysis shows correlation coefficient, Pearson product correlation, Chi-Square and regression of the variables under investigation.

### *1.1. Keywords: Social class and Access to Healthcare*

#### 1.1.1. Definitions of Concepts

##### 1.1.1.1. Social Class---Independent Variable

Social class refers to a group of people in a society who have same socio-economic status. The concept refers to a collection of individuals who share similar conditions. The concept has also been used to refer to a group of people who have similar levels of wealth, influence, and status. Sociologists have used three methods to determine social class: upper, middle and lower class. Gullup has used 'five levels to define social class: upper, upper middle, middle, working and lower class'. Gilbert defines social class, 'as groups of people/ families who are more or equal in rank and differentiated from other families above or below them with regard to characteristics such as occupation, income, wealth and prestige'. Social class is therefore a set of concepts used in social sciences and political theory to mean social stratification in which people are grouped hierarchically in social categories, most common being the ones referred presently.

Pierre Bourdieu has attempted to explain 'social reproduction, the tendency for social class status to be passed down from one generation to the next'. This happens because each generation acquires cultural capital (tastes, habits, expectations, skills.....'). Ogburn and Nimkoff define social class as 'one or two broad groups of individuals who are ranked by members of the community in socially superior and inferior positions'.

However, Max Weber defines social class as 'class or aggregates of individuals who have the same opportunity of acquiring good, the same exhibited standard of living'. Sociologists here see social class as a powerful form of stratification but other layers can be drawn on such factors as age, gender, and ethnicity and so on'. In that regard, 'placing people within such layers or strata means that some will be in higher or lower positions; others will have power, whereas others will be relatively powerless'.

Max Weber (1864-1920) argued that social class was based on a person's market position which is basically how much money or wealth they have and their bargaining power to get this.

Karl Marx social theory acknowledged two social classes: Bourgeoisie who are the owners of the means of production and the Proletariat, the workers who have sold their labor, referred to as the exploited masses. According to Karl Marx, these are a people who are in a relationship to the means of production. The bourgeoisie own capital and the proletariat own their labor. Karl Marx views such relationships exploitative, shown by 'surplus value'

Karl Marx aimed to bring about a classless society where common means of ownership is practiced. He regarded capitalist society as exploitative as everything was determined by money and economics. In his view, ruling ideas are imposed on lower class, and this explains persistence of capitalism. In that regard, Karl Marx, argued, each social class should have its own ideology and system of beliefs. Karl Marx advocated for a revolution whereby society would be classless. This Marxist definition and interpretation of social class is paramount to the study. This is because society focused on access to healthcare based on socio-economic resources. The question as to who controls or directs the allocations of resources is of paramount importance to the study.

In the study, social class was operational zed on the basis of age, gender, income, education, occupation, marital status, wealth and place of residence. Socio-economic status in the study is broken into three levels: upper, middle and lower class. These are measured/operational zed social class based on the criteria shown below; age, gender, income, education, employment, marital status, and wealth. Socio-economic status is broken into three levels; upper, middle and lower, and assets are categorized as income, education and occupation. These are used to measure the social position of the household in the stratification of the society.

##### 1.1.1.2. Access to Public Healthcare-----Dependent Variable

Karl Marx viewed access to healthcare in terms of political power and economic dominance in a capitalist society. He argued that major improvements in health system could not occur without fundamental changes in broad social order. In his view, the health system mirrored the social order in society. He saw the bourgeoisie as the controllers of the health systems, health institutions, and the health workers were stratified according the dictates of the capitalist system. This system could therefore not allow occupational mobility of the health workers.

Karl Marx argued that governments spend less on ill health, poor housing and institutional structures. In that view, ill health was viewed as a class problem that was related to social inequality. Access to healthcare was therefore class

based, between the bourgeoisie and the proletariat. The bourgeoisie who control most resources had better access to healthcare. On the other hand, the proletariat had less because of their social position in class. The solution to equitable access to healthcare was a transformation of socialism into communist state/society. This is a classless society, stateless human society based on common ownership; each according to his ability and needs. In this society, no one would have power over another and everyone should be equal. This ideal situation would give equal access to healthcare to everyone.

Access to healthcare is central in the performance of health systems around the world. Access to health is defined as a way of approaching, reaching a place, opportunity to reach a health facility (Whitehead, M. et al. 1997). It has also been defined as access to a service, a provider, or an institution; access here is defined as the opportunity (Gulliford, et al. 2002). Access to healthcare means helping people to command appropriate healthcare resources in order to preserve or improve their health. This implies that services should be available and adequate to supply the services required. People should have the opportunities to obtain healthcare, and in that way, they can access healthcare. Some definitions suggest that access 'means having timely use of personal health services to achieve the best health outcomes (IOM. 19930). In this context, coverage facilitates entry into the health system. Access to healthcare has been conceptualized in several ways. In this study access to healthcare, was measured/ operational zed using the following dimensions: accessibility, approachability, acceptability, availability/accommodation, affordability and appropriateness. The model used shows the factors that lead to the use of health services. Access to healthcare is determined by predisposing factors

## 2. Methods

This is the blue print for conducting the study and it maximizes control over factors that could interfere with the validity of the findings. Designing helps to plan and implement the study in a manner that will assist to get the intended results. This could therefore increase the chances of getting the information that could be real to the actual situation. Both quantitative and qualitative descriptive approach was chosen to investigate the factors that influence access to healthcare. This is because the study is concerned with numbers and frequencies, perceptions and perspectives experienced by households selected for the study.

This study was descriptive given that it conformed to all the characteristics of descriptive research. Specifically, cross-sectional method was used because it is a one-shot assessment of the sample of respondents. The purpose of cross-sectional design is to determine to what extent different classes in the sample differ on some outcome (independent variable). It measures variations in the responses to the independent variables in the sample. Data is collected at one point in time. Categories used in the study include gender, different age groups, income groups, social class and ethnic groups, attitudes and opinions. Field study and surveys used produced data that was used as numerical and descriptions. Descriptive design enabled the study to collect both qualitative and quantitative data. It was felt that using a combination of both improves evaluation of the study as it ensured that the limitation of one type of data was balanced by the strength of the other. This combination also ensured that the understanding is improved by integrating different ways.

### 2.1. Data Collection

#### 2.1.1. Population

Polit and Hungler refer to the population as an aggregate or totality of all the objects, subjects or members that conform to a set of specifications. In this study the population, were all the households of all races/tribes, age groups, income levels, educational status, employment status, marital status, wealth status, residential areas who lived in Nairobi County during the survey. The people in the population must be in possession of specific characteristics in order to be included in the study. The eligibility criteria in this study were that the participants had to be residents in Nairobi County, have voluntarily accepted to participate in the study and that they also use health facilities in Nairobi County

The procedure used to select a portion of the population to represent the entire population is sampling (LoBiondo-Wood & Haber, 1998). A number of households who voluntarily accepted to participate in the study were selected. This procedure of selecting a sample to be studied rather than attempting to study the entire population of households saved money and time. This is so because obtaining data from the entire population, analyzing and interpreting would have been impossible to finish within the time constraints and limited financial resource.

#### 2.1.2. Sample

A sample is a subset of a population selected to participate in the study; it is a fraction of the whole, selected to participate in the study (Brink, 1996). In this survey, a subset of 1066 households was selected out of the entire population of households who voluntarily accepted to participate in the study, in Nairobi County. Chadha's formula (2006) was used to determine the sample size:

Required information :-

- Anticipated population proportions =  $P_1$  &  $P_2$
- Confidence level = 95%
- Absolute precision required on either side of the true value of the difference between proportions =  $d$

Sample size can be estimated using following formula:

$$n = \frac{Z_{1-\frac{\alpha}{2}}^2 [P_1(1-P_1) + P_2(1-P_2)]}{d^2} \quad \text{--- (3)}$$

$P_1, P_2$  = anticipated value of the proportions in the two populations.

For confidence level 95%  $z$  is taken as 1.96

Nairobi West

$$P_1 = \frac{212,295}{985,016} = 0.2155 = 22\%$$

Nairobi East

$$P_2 = \frac{369,866}{985,016} = 0.375 = 38\%$$

Nairobi North

$$P_3 = \frac{327,428}{985,016} = 0.33 = 33\%$$

Westlands

$$P_4 = \frac{75,427}{985,016} = 0.07 = 7\%$$

$$n = \frac{1.96^2 \{0.22(1-0.22) + 0.38(1-0.38) + 0.33(1-0.33) + 0.07(1-0.07)\}}{0.05^2}$$

$$n = 1,066 \text{ households}$$

A total of 1,066 households were surveyed using a random and multilevel sampling approach, respectively. These constituted the population for the study. As mentioned earlier, it was not always possible to cover all the population but this allowed for the highest accuracy to be obtained. The sample was therefore deemed reliable and appropriate to the study.

## 2.2. Sampling Techniques

Multistage sampling is taking of samples in stages using smaller and smaller sampling units at each stage. This is a form of cluster sampling that involved several cycles of sampling. Counties were divided into clusters and then sampled. These selected clusters were further divided into smaller clusters and re-sampled again. This process was repeated till the ultimate sampling units were selected at the last of hierarchical levels.

Snowball technique was used to identify 10 households' members who displayed the qualities or characteristics of interest to the study. After obtaining the information from the selected households, the researcher requested the respondents to assist in locating other respondents who would provide similar information. This method was found useful because the population with such characteristics were not easy to identify while others were unwilling to provide sensitive information.

A convenient sample comprising 20 health officials from the County was selected during the interview. A convenience sample is readily accessible persons in the study (De Vos 1998). These were health officials who were readily available and they fitted the criteria set for the study. However, the risk of bias is great, because each member of the population does not have an equal chance of being included in the sample. The results obtained may therefore not be generalized to the entire population.

A stratified sample comprising 100 health workers was divided into different sub-groups according to their job titles, and then randomly selected for the study. Specialist group titles included medical officers, dentists, dental clinics, clinical officers, enrolled nurses, public health officials, pharmacists, technicians and others. This was found useful because each sub-group received proper representation within the sample. This also provides a better coverage of the population. The research has control over the sub groups to ensure all are represented.

This method was also used to select 20 health facilities for the study. The total population of health facilities was divided into sub-groups including national hospitals, county referral hospitals, district hospitals, sub-district hospitals, health centers, and dispensaries. Thereafter, they were randomly selected for the study. This enabled the researcher to high light each sub- group within the population. This method ensures the presence of each sub-group within the sample.

The study found it more economical to choose a sample of 1066 households, instead of studying the entire population of households in Nairobi County. The study also found it unnecessary to collect data from the entire population,

as the responses from the sample were adequate to secure the information needed. This sampling technique was useful because of low costs and less time consuming; this suitable in situations where resources are limited.

### 2.3. Data Collection Techniques

In this study, data was collected using multiple techniques. The purpose of the study was to increase access to healthcare; to specifically determine the influence of selected factors in access to healthcare.

Quantitative data was collected using *face-to-face interviews and questionnaires*. The questionnaire was pre-tested before it was used for data collection. Six interviewers collected the data under the supervision of the lead researcher. The teams mapped out the households to be subjected to the interviews; each interviewer was allocated specific numbers of households for the interviews. The exercise of data collection lasted for 90 days. At the end of each day the teams met to deliberate or recheck the questionnaires for completeness.

A comprehensive questionnaire was designed with minimum adjustments. The objectives of the study dictated what the questionnaires contained. Researchers changed the questionnaires to ensure that the questions would answer the research questions. The questionnaire was organized into three sections: to collect information on demographic factors of the households, socio-cultural factors and institutional factors. The study also collected information on household characteristics using questionnaires that were both closed and open ended questions. Questionnaire items were of two categories namely open-ended and closed-ended. Open-ended items asked a question and gave participants the authority to respond in whatever way they chose. The open-ended or unstructured questionnaires were entirely left to the respondents' own discretion but with close supervision by the researcher. The researcher provided no clues or direction for the response. The respondent answered the question in any way desired as long as he or she stayed within the research scope.

These key informants were purposively selected and they included health officials and health workers. These were knowledgeable people who were considered better informed on health policy matters. The data collection procedure involves the presentation of oral- verbal stimuli and an oral- verbal response. These questions were asked orally and are classified as unstructured and structured interviews. The research teams identified respondents according to predetermined criteria and requested them to answer certain questions. The research team noted down the answers given and recorded the responses.

### 2.4. Data Analysis and Interpretation

Quantitative data was based on objective one. In objective one, the study hypothesizes that demographic variables have a profound impact on access to public healthcare services. Characteristics of the household population analyzed were age, sex, education, occupation, marital status and resident distribution. The objective of the analysis was to examine the relationships between the two variables contained in objective one. The research therefore focused on quantitative data for analysis.

Data was systematically analyzed using statistical techniques to describe, illustrate and evaluate the data integrity and accuracy. This was quantitative and therefore descriptive statistics were used to analyze key features of the household sample. Using SPSS (version 23), the data was analyzed to show the correlations or relationships between the variables in objective one. This is software used to perform quantitative analysis.

### 2.5. Ethical Consideration

The National Commission for Science, Technology and Innovation approved the study's research protocol on 14<sup>th</sup> July, 2015 for a period ending 18<sup>th</sup> December, 2015. Permit No. NACOSTI/P/15/7814/6977 was issued on 14<sup>th</sup> July, 2015. The Ministry of Health authorized the study to be carried out on its health facilities; The Ministry of education too authorized the study to be carried out; The County Government of Nairobi, Health Department authorized the study to be carried in the County.

Households in Nairobi County were eligible to participate in the study, 15+ years of age, and they live in Nairobi. Prior to participating, all individuals received a letter describing the study purpose and procedures, and that participation was voluntary. Oral and written consent was obtained from the participants before the interviews commenced. All the data obtained was held confidential. The use of the data collected, the purpose and access to information as well as the role of the researcher was explained. The interviewers explained the usefulness of the study findings, which was to help plan improvements of access to public healthcare among various stakeholders.

### 2.6. Findings

This section presents the findings of the study. These findings are presented correspond to the objectives of the study. This section shows the results of selected demographic variables. These include age, gender, income, education, occupation, wealth and marital status. The results are based on the sample of households (1006) selected for the study. The results are presented in frequencies and percentages. The variables here for the study include: age, gender, income, education, employment, marital status and place of residence. The responses are expressed in frequencies and percentages.

### 2.6.1. Age Factor

These findings show that youth of this age bracket (15-29 years) have fewer opportunities to access resources that can enable them purchase access to healthcare. Lack of knowledge and skills necessary for access to healthcare services put them at high risks. They become vulnerable as they lack the capacity to purchase healthcare. These limitations deny them access to healthcare services. Age group, here is an independent variable that has a significant influence on access (dependent variable) to healthcare services.

Findings show that 40% of the households found in this group are neglected and are given no incentives to invest and contribute to the growth of the County. This is a critical age, and left without resources undermine their capabilities to procure easy access to healthcare. These households have no resources and this affects their capabilities to access healthcare.

The age bracket of 15-29 years is productive and contributes significantly to the National development. This is about 50% of the current population in the County. It also contributes 5% of the labor force. The findings show that this age group faces many challenges including lack of education, employment and health problems, risky behaviors like drugs, substance abuse, irresponsible sexual behavior that lead o HIV/AIDs or STDs (CIDP, 2018-2022). These are major challenges. This population bracket lack socio-economic resources to enable them face health challenges. Lack of these resources, limits their capabilities to access healthcare.

Above 65 years and above, this group was found to be quite insignificant in the economy (GOK, 2008-2012). Most of them are retired public servants, and some have gone back to the up country while others are still in the County. This is 15% of the respondents and they had no resources to support themselves. This age group lack access to healthcare. The above 65 years age factor is an independent variable, and it has influence on access to healthcare (dependent variable). The results show that there is a positive relationship between the variables.

### 2.6.2. Gender Factor

At the time of the study, 52% (554) of the respondents were females, 48% (512) were males. Study findings show that the majority females, 60% of the respondents had fewer or unequal opportunities than men in the ownership or access to productive resources. The findings show that women face unequal earning prospects than men 30% (320); they have limited education largely due to discrimination 40% (426), and their lives were in danger of being cut short 30% (320). The policy bias by the government has worked to exacerbate these differences. Gender inequality is a factor that is an independent variable that has influence on access to healthcare (dependent variable). Access to healthcare is limited females because of their vulnerabilities as shown in table 1.1 below:

Disparities	Frequency	Percentage %
Unequal opportunities	320	30
Limited education and unequal earnings due discrimination	426	40
Threats to lives	320	30

Table 1: Gender Disparities

### 2.6.3. Income Status

The results show that 10% (106) upper social class with high income and therefore access good healthcare. The 20% (214) are middle social class who have fairly good incomes, and therefore have access to fairly good healthcare. However, the 70% (746) are lower social class who have no incomes, hence, have poor access to healthcare, as shown on Table 2 below:

Social class	Frequency	Percentage%
Upper class	106	10
Middle class	214	20
Lower class ( vulnerable groups, Landless, urban poor, unskilled and semi-skilled, households headed by people without education, female headed households, PWDs, AIDS orphans, street children and beggars (GOK, 2006a).	746	70
Tot	1066	100

Table 2: Distribution of Income

The findings show that income was an important variable and determinant to access to healthcare services. Income is an independent variable which has influence on access to healthcare (dependent variable). The results show that there is a relationship exists between independent and dependent variable.

#### 2.6.4. Education Status

The findings show that 20% (213) of the households had not attended school, 42% (448) attended primary education, 24% (256) attended secondary education, and 14% (149) attended university education and above as shown on Table 3 below:

Level of Education	Frequency	Percentage %
None	213	20
Primary	448	42
Secondary	256	24
University and above	149	14
Total	1066	100

Table 3: Distribution by Education

The results show considerable variations in education achievements. 14% of those with university education had more knowledge and skills that enhanced access to healthcare. 24% with secondary education had medium knowledge and skills and could therefore access healthcare. 42% with only primary education had fairly limited opportunities, hence, had very limited access to healthcare. But 20% had no education and therefore virtually limited from having socio-economic bundles that were imperative to accessing healthcare. They had limited or no options at all given that they lacked knowledge and skills that were fundamental in accessing healthcare.

Education therefore is an important variable (independent variable) that has significant influence on (access (dependent variable to healthcare)). The findings show that there is a relationship between education and access to healthcare.

#### 2.6.5. Occupational Status

The findings show that being unemployed and the length of unemployment affect health status. The study shows that 48% (512) was in lower occupations (manual workers), 25% (267) were in middle occupations (non-manual), and 15% (160) were in highest occupations. The 12% (127) were unemployed, as shown on Table 4 below:

Category of Occupation	Frequency	Percentage %
Lower occupations	512	48
Middle (non-manual) level occupations	267	25
Upper level (highest) occupations	160	15
Unemployed	127	12
Total	1066	100

Table 4: Distribution by Occupation Status

Occupational status was found to be important variable in the survey findings. The employed have better access to healthcare than the unemployed. Employment is a source of empowerment, because it puts households in control of incomes. Employment is therefore an important key determinant of access to healthcare.

The results show that occupation (independent variable) has influence on access to healthcare (dependent variable). There is a relationship between the independent variable (occupation) and the dependent variable (access to healthcare).

#### 2.6.6. Marital Status

The results of the survey show that 60% (640) of the sampled households were married, 30% (320) of them were unmarried or divorced, and single or divorced stood at 10% (106) households. The results showed mixed responses. Married couples had better opportunities for resource acquisition compared to single households. Therefore, married couples had better access to healthcare. Combined resource base creates opportunities to acquire healthcare compared to single households.

However, some unmarried couples and single families also have access to healthcare. The results show that they spend less on family matters and therefore have some savings. This savings increases access to healthcare. The same results were also shown with the divorced. Therefore, marital status is a weak indicator for access to healthcare. However, it does have influence on access to healthcare. The marital status, single and divorced households have some influence on access to healthcare. They all act as (independent variables) and all have significant influence on access to healthcare. There is a correlation between each one of them (independent variable) and access to healthcare (dependent variable). The frequencies and percentages are as shown on Table 5 below:

Marital Status	Total number	Total Percentage %
Married	640	60
Unmarried/divorced	320	30
Single/widowed	106	10
Total	1066	100

Table 5: Marital Status



### 2.7. Place of Residence

The patterns of settlement of Nairobi County show that 60% (640) households live in low income areas like Eastlands, Mathare Valley, Kibera, Kawangware; 30% (320) live in medium income areas like Parklands, Eastleigh, South B/C; and 10% (106) in high cost areas like Lavington, Muthaiga, Woodley, Kileleshwa, Karen and parts of Langata, as shown on Table 6 below:

Area of residence	Frequency	Percentage %
Upper level residence	106	10
Middle level residence	320	30
Lower level residence	640	60
Total	1006	100

Table 6: Place of Residence

Results show that upper residential areas comprise upper social class (10%) with high socio-economic factors. They have high incomes, education, and occupational opportunities. The middle level residence comprised middle class (30%) with fairly good incomes, education and incomes. They too had fair access to healthcare. However, lower level residential areas comprised lower social class with very limited socio-economic status: low or no education at all, poor incomes, and often without suitable occupations. These had poor access to healthcare, due to their deprived status. Residential areas there had significant influence on access to healthcare.

*Residential area (independent variable) had a relationship with access to healthcare (dependent variable).*

### 2.8. Wealth

The results show that wealth was not evenly distributed in the County: 10% (106) households were the upper class with plenty of socio-economic resources compared to other social classes. They had better access to healthcare due to their advantaged status. Another 30% (320) were of middle class with moderate socio-economic opportunities. This social class had moderate access to healthcare compared to the lower social class. The lower social class, comprising 60% (640) had extremely limited socio-economic opportunities. Consequently, they could access healthcare as compared to either upper or middle class social hierarchies, as shown on Table 7 below:

Wealth Level	Frequency	Percentage%
Upper class	106	10
Middle class	320	30
Lower class	640	60
Total	1066	100

Table 7: Population by Wealth

## 3. Discussion

Socio-economic factors include income, education, occupation and wealth. The County is characterized by inequalities in growth. This conceptualized as the disparity in distribution of such attributes or resources. In economic terms, disparity could be in terms of ownership or resources, in the distribution of wealth and in incomes and in access to economic and social goods and services. These factors shape the distribution of opportunities and define livelihoods. Inequality influences economic and social outcomes which in turn have implications in growth,

Recent researches have shown a negative relationship between inequality and growth (Deineger K. et al. 1996; 565-591). The more unequal distribution of assets such as land or other income earning assets, the lower the rates in growth. These inequalities in income and income-earning opportunities take the form of disparities between the urban areas and the informal settlements, different geographical areas, men and women, and different social economic groups in society.

Growth provides economic opportunities, incomes and jobs. Income provides the capability to access the basic necessities of life such as food, shelter, and health. It provides the purchasing power for participating in the economy. In Nairobi County, certain sections of the population have benefitted very little, and this has perpetuated inequalities. In the County, there are skewed distributions of income and wealth among the households in the County. For example, the study shows that the richest 20% of the households in the County receive nearly 70% of the total income (CIDP, 2012-20122). This pattern is persistent and entrenched in the County (CBS, 1998/99). The income and wealth are heavily skewed in favor of the upper and middle classes. These attributes explain the facts that define access to health care.

The youth between 15-19 and 20-24 years encountered many challenges including lack of income, education and employment. Due to lack of such socio-economic resources, these age groups engage in drugs, unwanted pregnancies, and high risks associated with HIV/AIDs. Lack of such resources and opportunities deny them the capabilities critical for accessing healthcare. They become vulnerable to various diseases and end up with high mortality rates and low life expectancies. Age factor therefore is an important factor in influencing access to healthcare.

The study also shows that households at the age of 65 years and above have formerly retired from active service; others have gone back to the up country; these age group are inactive and rely on their relatives for upkeep. They do not have enough savings either. The age group lack addition socio-economic resources and opportunities to sustain their

health demands at old age. Lack of these commodities limits their capabilities to access healthcare. Age factor here is therefore a significant factor in access to healthcare.

Gender is an important factor in access to healthcare. The study shows that females have limited access to socio-economic commodities compared to men. They had less access to income, education, occupation and wealth partly because of cultural factors or pure discrimination on the basis of gender. Lack of training of health attendants, expose women to maternal and infant mortality rates. These inadequacies of material resources based on gender, affect their access to healthcare. They limit their capabilities to access healthcare at equal measure as men. This perpetuates inequalities in healthcare. Gender was therefore an important variable that influenced access to healthcare.

Socio-economic factors defined by income, education, occupation and wealth empower upper households to purchase healthcare. The high incomes, education, occupations and wealth provide more opportunities and choices to access healthcare services, both in the private wing of government facilities and in the private sector. These resources are skewed in their favor, hence increasing their capabilities.

However, the lower social groups lack these resources because they are deprived of. In the study, these groups live mainly in informal settlements like Majengo, Mathare, Kawagware, Korogocho and Kibera amongst many other upcoming informal settlements mushrooming in the outskirts of the city center. These informal settlements lack social services of all kinds, including having poor roads, poor education coupled with low incomes, and no wealth at all. The situation is compounded by poor access to water and sanitation management, with huge heaps of garbage. They live in extreme poverty, and this denies them the necessary capabilities to procure access to healthcare. These vulnerabilities expose them to serious diseases, leading to mortalities with reduced life expectancies. Socio-economic factors were therefore an important influence on access to healthcare

#### 4. Conclusion

This study demonstrates that access to healthcare is unequal among the social classes in the County. The lower social economic groups, which include the poor, vulnerable groups like children, street children, PWDs, migrants, youth and women. These groups are disadvantaged as they are deprived of socio-economic resources (income, education, occupation and wealth). This limits their capabilities to access healthcare.

On the other, the upper and middle class groups have better access to these resources, and therefore have better capabilities in accessing healthcare. The distribution of these resources is lopsided in favor of the upper and social classes. This allows them to have better capabilities to access better healthcare, given the vast opportunities endowed upon them. This duality increases inequalities in access to healthcare.

These health inequalities have been attributed to unequal distribution of socio-economic resources. These factors are varied incomes, education, occupation and wealth. This analysis suggest that there are several areas for further research: how socio-economic groups can access healthcare in equal terms; how poverty and other health determinants can be reduced or eliminated; and how capabilities can be spread across all social groups in the County.

This study argues that these factors should be equitably spread across all the households in the County. All the factors discussed need to be increased or improved so that they can effectively provide access to healthcare for all. All social groups including the low social classes should be involved in addressing the challenges facing the sector.

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