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Factors That Influence Household Access to Healthcare Services in Eldoret Municipality, Kenya

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Abstract

Against a background of limited access to healthcare services, this paper examines the factors that influence household access to healthcare services in Eldoret municipality, Kenya. The main objective of the study was to identify the factors that influence household access to healthcare services in the municipality. The study was guided by the following specific objectives: to investigate the socio-economic factors that influence household access to healthcare services; to assess the influence of health insurance on household access to healthcare services; and to establish the influence of referral system on household access to healthcare services. It is hoped that the results of the study will improve policy-makers understanding on factors that influence access to healthcare services and to serve as an important tool for any possible intervention aimed at improving access to healthcare. Health Belief Model (HBM) is employed as the theoretical framework. Research design takes survey form. The unit of analysis constituted household heads in the municipality. Stratified, systematic, purposive and convenience sampling procedures were used to arrive at a sample size of two hundred and sixty household heads. Data was derived from both primary and secondary sources and analyzed using Statistical Package for the Social Sciences (SPSS) to ascertain statistical relationships between variables. The findings indicate that: there are specific urban dimensions on access to healthcare; among the respondents, there is substantial unmet healthcare need; and for many urban families using healthcare services is determined by much more than being able to reach them physically. It further answers the questions: do socio-economic characteristics, health insurance and referral system have any role in access to healthcare? Besides, the findings of the study raise new areas for further research in healthcare.

Keywords

Access, Households, Healthcare, Health Insurance, Referral

1. Background Information

The study focuses on the factors that influence household access to healthcare services in Eldoret municipality, Kenya. The notion of "healthcare" is returning at the core of human development debate (Filmer et al., 1997; Preker & Feachem, 1996). At the global level, there is widespread pandemic with negative impacts in access to healthcare services (MacIntyre, 2020). Empirical evidence shows that there are factors that influence access to healthcare services and for each service component, there is a set of factors that determine how well these services will be utilized (Williams & Torrens, 2008). These factors are finance, culture, and geography. Freeman et al. (1994) list other influences as age and sex, incidence of illness, education, proximity of healthcare facilities, family income, health insurance coverage, residence and perceptions of both providers and recipients. O'Reilly et al. (2001) demonstrated that increasing distance from the healthcare centre reduced the likelihood of using the service. In India, access to healthcare is reported to be guided by notions of efficiency rather than equity, and focus on supply, rather than demand side issues (Iyer, 2005).

In Kenya, unfavourable distribution of health services continues to widen with observed disparities and imbalance in access across the country (Republic of Kenya, 2002a). Health sector faces significant constraints due to inadequate funding and poor distribution of human resources (Republic of Kenya, 2009; Odada & Ayako, 1988). In addition, Kenya experiences the loss of a sizeable number of highly skilled health professionals (physicians, nurses, dentists, and pharmacists) by their migration to developed countries (Kirigia et al., 2006; Misau et al., 2010). The World Health Organization (WHO) refers to the period from 1993-2000 as a phase of degeneration of healthcare in Kenya due to declining life expectancy from 60 years in 1993 to 47 years by the year 2000 (WHO, 2004).

Eldoret municipality, which is the concern of this study, has witnessed an increase in population over the years (Republic of Kenya, 2001; Republic of Kenya, 2002b; Republic of Kenya, 2010). Its public health facilities are over utilized (Republic of Kenya, 1997). Further, many people are unable to afford the private hospital charges. This is attributed to socio-economic difficulties because of the introduction of user charges in the public outlets. High population growth rate has led to increased demand for basic services in the municipality (Republic of Kenya, 2005). The government medical institutions though popular with the low-income groups, are not well equipped as both in and out patients have to buy most requirements from the open market (Nyakaana, 1996).

Healthcare research on urban populations has been increasing. However,

against the background of previous research, very little empirical research addresses the factors that influence household access to healthcare services for urban populations. The study intended to provide rich insights that will advance knowledge on access to healthcare in an urban setting. It is hoped that the results of the study will help improve policy-makers' understanding of the determinants of access to care and serve as an important tool for any possible intervention aimed at improving the use of healthcare in the country. Researchers, not only in healthcare but also in social sciences and development planning, will find the study a useful contribution to existing knowledge on access to healthcare. Additionally, the findings of the study hopefully raise new areas for further research.

The basic reference for the study used to test the field data was the Health Belief Model (HBM). HBM was originally developed to explain why people failed to utilize health services (Hochbaum, 1958; Rosenstock, 1966; Rosenstock, 1974; Rosenstock et al., 1988). It has since undergone various revisions (for example see Becker, 1974; Tones & Tilford, 2001; Janz & Becker, 1984). The HBM centres on three beliefs that account for the variance in predispositions to adopt a recommended health practice (Becker, 1974). These include a belief that individuals will not adopt health behaviours, unless they believe they are susceptible to a disease. Second, they believe it is serious (a belief in the severity of the consequence of not taking action). The third belief influencing action is that the benefits of treatment or intervention will outweigh the costs (including social benefits and costs such as inconvenience, discomfort, or embarrassment).

The objectives of this study were to investigate the socio-economic factors that influence household access to healthcare services; to assess the influence of health insurance on household access to healthcare services; and to establish the influence of referral system on household access to healthcare services using data from Eldoret, municipality. The study used survey research as the data gathering technique to enable collection of self-reported beliefs, opinions, characteristics and past or present behaviours. The choice of this research design is made possible based on its ability to be used in determining the amount of correlation between two or more variables.

2. Conceptualizing Household Access to Healthcare Services

Access to healthcare services has generated considerable debate and discussion, and several studies have formulated frameworks or models to represent the multiplicity of influences on it (Andersen & Newman, 1973; Penchansky & Thomas, 1981; Andersen, 1995; Arksey et al., 2003) in (Heenan, 2006). Indeed, access is a shorthand term referring to the timely use of health services to achieve the best possible health outcomes (Patrick & Erickson, 1993). March et al. (1999) report that access to a resource refer to the opportunity available to use it. They acknowledge that these opportunities are socially constructed and constrained by structural inequalities. Healthcare service on the other hand, is broadly defined by Oleske (2001) as physician or other individual healthcare professional ser-

vices, facility use, prescription use, or even the use of medical devices.

Much research has focused on the barriers that affect access, with authors commenting on the extent to which physical attributes, such as distance and remoteness, impact on "populations" utilization (Fryer et al., 1999; Joseph and Hallman 1998; and Nemet and Bailey 2000) in Heenan (2006). Penchansky and Thomas (1981) stressed that accessibility was not simply about distance and other physical "barriers" but has four other dimensions: availability, accommodation, affordability and acceptability. Similarly, Arksey et al. (2003) noted that access has several dimensions each of which requires different measures, service responses and interventions.

Studies show that socio-economic circumstances are perhaps the major determinants of how people respond to health concerns (Dorling & Simpson, 1999). According to Dina and Law (1998) socio-economic status affects access to health and is associated with the receipt of little or no preventive or therapeutic healthcare. In addition, the Ministry of Health (MOH) reports that, socio-economic factors do not operate in isolation, but in conjunction with access to healthcare services (MOH, 1997).

According to Detels et al. (2004) components of socio-economic status are intertwined with crucial features of life that affect health. They state that age, sex, and ethnic structure of a population, along with its geographical and occupational distribution, is likely to determine its level and pattern of need for, and use of health services. Alongside the literature on barriers to access, there is a growing body of research on the socio-economic influences on service utilization of gender, age, disability, ethnicity, poverty and local social and cultural conditions (Heenan, 2006). Health varies with social class and an individual who is disadvantaged in one area of life is likely to be disadvantaged in others (Scambler, 2003). It was therefore necessary to conduct a household level study to understand factors related to access to healthcare services.

The social status of women in the household affects healthcare needs and access (Batliwala et al., 1998 and Madhiwalla et al., 2000) in Iyer (2005). Gender has been identified as one of the social pivots around which access to healthcare is configured. According to Scambler (2003) gender plays a significant role in health and utilization of health services. Whereas both health and gender depend on biological circumstances, they are also socially constructed (Lorber & Moore, 2002).

Concern is widespread that fees at the point of delivery of healthcare services or costly membership in insurance schemes could deny the poorest people access to modern healthcare services (Bedi et al., 2004). Indeed, health insurance schemes are an increasingly recognized tool for financing healthcare provision in low-income countries (WHO, 2000). Preker and Carrin (2004) report that there is some evidence that neither purely statutory social health insurance nor commercial insurance schemes alone can significantly contribute to an increase in coverage rates and thereby broaden access to healthcare. They report that large proportions of people in Africa are not covered by formal health insurance,

and access problems are reported in terms of financing and geographic out-reach.

Health services are provided at different levels depending on the type of intervention the patient requires. Indeed, referral is defined as any process in which healthcare providers at lower levels of the health system, who lack the skills, the facilities, or both to manage a given clinical condition, seek the assistance of providers who are better equipped or specially trained to guide them in managing or to take over responsibility for a particular episode of a clinical condition in a patient (Al-Mazrou et al., 1990). Hence individual patients need to get direct clinical services provided at lower levels of the system, before accessing upward referral which is frequently the most functional component of the health system (Hensher et al., 2006), paying greatest attention to quality of care with elaborate equipment involved in diagnosis and treatment. Early referral helps to optimize healthcare use and patient management (Wavamunno & Harris, 2005). Musgrove (2004) states that a sick or injured person can be referred "up" from a health centre or physician to a hospital and referred "down" when hospital care is no longer required.

Preker et al. (2004) found that among other factors, improving quality and increasing the referral rates would increase the utilization rates of health services. However, they report that analysis of the value of referral hospitals is bedevilled by the fact that, when judged empirically, they do not work as they are supposed to. Similarly, Kiranandana and Apairatr (1990) have also documented that people still do not follow the referral system.

3. Methods

The study area is Eldoret Municipality, the capital and administrative centre of Uasin Gishu County, Rift Valley Province, Kenya (see Figure 1). Like other urban centres in the country, it is better served with both government and private hospitals, and health centres (Republic of Kenya, 2005). The municipal residential type is low, medium and upper income. A household represents the most important unit in terms of time and resources invested to attain health hence the unit of analysis in the study constituted individual heads of household in selected estates within the municipality.

In order to obtain representative samples of households belonging to different groups, distribution across geographical location, as well as economic class, a four-stage sampling procedure was adopted. The first stage involved stratified sampling of the estates. This divided the population into mutually exclusive sets or strata to ensure that all the classes of estates were adequately represented. The municipal residential type is low, medium and upper income. The sampling was proportionate as an equal number of three estates were drawn from each stratum. The estates are namely, Huruma, Kamukunji, and Langas, (low income), Pioneer, Kapsoya, and Kimumu (middle income), Elgon View, West Indies and Garden Estate (upper income).
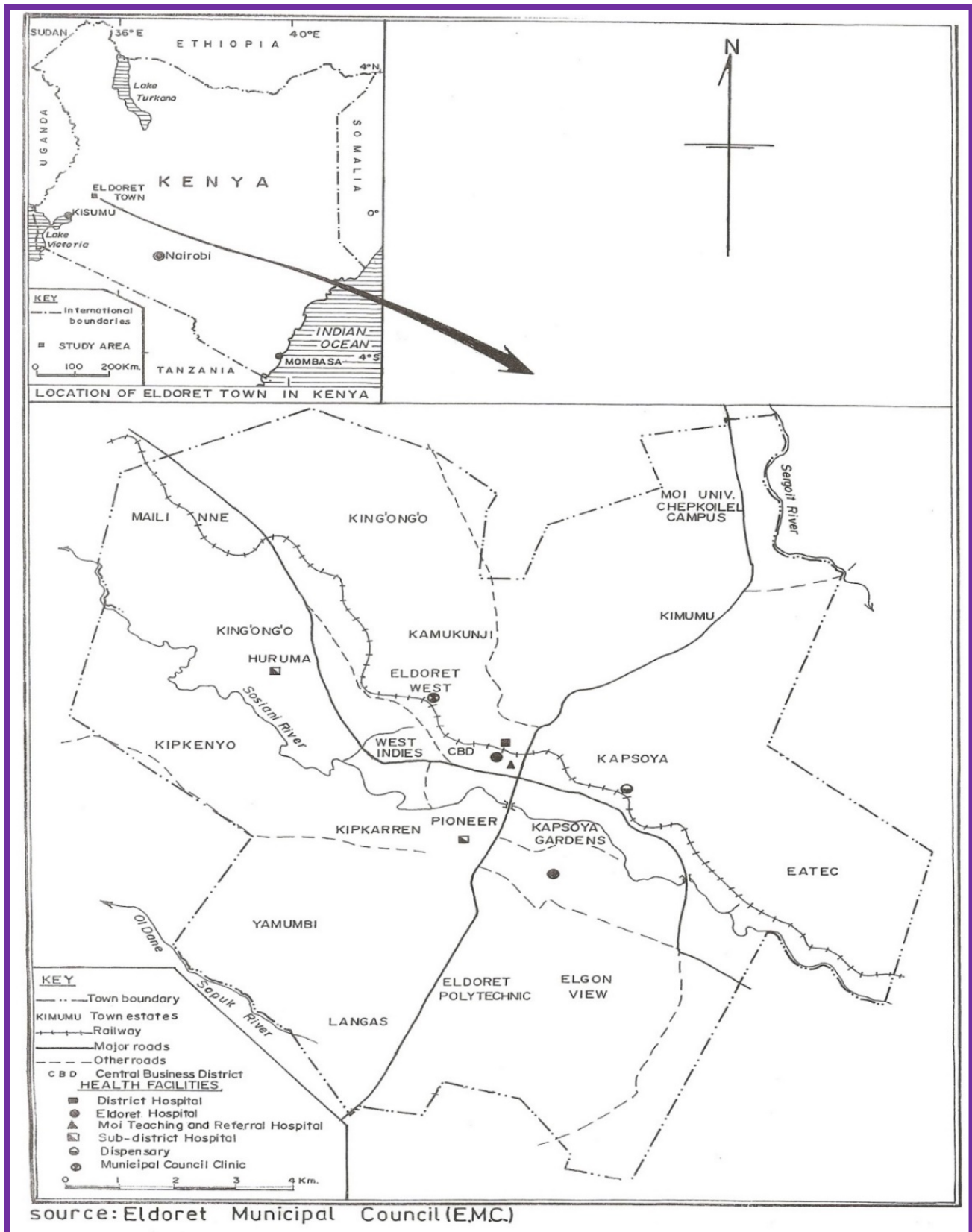
Source: Eldoret Municipal Council (E.M.C).

Figure 1. Map of Eldoret Municipality.

The second step of selection involved systematic sampling procedure. This procedure was used to select twenty heads of households (male or female) from each of the estates at a constant interval of ten. Using such a sampling procedure, every tenth household head was selected in a circular systematic fashion, with equal probability, after a random start, until the required number of sample household heads within each stratum was reached. The procedure resulted in a sample size of 180 household heads from the estates.

In the third stage, healthcare facilities were purposely selected to obtain two government hospitals, two private hospitals, two health centres, and two dispensaries. Purposive sampling/deliberate or judgmental sampling of the healthcare facilities enabled selection of all categories and cadres of healthcare service outlets and enabled respondents to represent a wide range of opinion or experience. Lastly, based on the ease of access, convenience sampling/haphazard/accidental was applied to obtain ten household heads seeking healthcare service in each facility for an in-depth interview. It included patient exit interviews. This procedure generated an addition of 80 household heads.

Primary data was created using a pre-tested interview-administered schedule. It was both closed-ended (structured, fixed response) for quick and easy response; and open-ended (unstructured, free response). The survey questions solicited data on social, economic, and demographic characteristics of the households, and utilization of healthcare facilities. Secondary data or analysis of documents constituted statistical publications of the government, related organizations and their subsidiaries.

The completed interview schedules were serialized, coded and double-checked to ensure quality control for data processing. Data was entered into the computer for analysis using Statistical Package for the Social Sciences (SPSS). At the completion of data entry, simple scoring which is subject to descriptive measures was preferred. To determine if there are differences in data. Inferential statistics in this case the chi-square was employed to draw conclusions about significant relationships between variables.

Key ethical issues in social research as is suggested by Babbie (1992) were considered including the importance of voluntary and informed participation and the preservation of the participants' anonymity and the confidentiality of the collected information. The study constraints included difficulty in gaining access in the up-market residential areas, accessing relevant households was equally difficult in an environment with poor infrastructure characterized by poor planning and lack of designated roads particularly in the low income residential areas.

4. Results

Household level data were merged with healthcare facility-level data. While the data collected from the households in the residential areas had twenty heads from each sampled estate, data collected from representative of healthcare facilities contained varied number of individual respondents from the sampled estates

of study.

Table 1 presents the information about presence of illness in the household during a four-week recall period preceding the survey. About 66% reported incidences of illness four weeks prior to the survey while about 34% had no incidence of illness in the same period. About 53% of those who sought outside healthcare went to the public facilities while about 31% went to private facilities and about 17% sought self-treatment (see Figure 2).
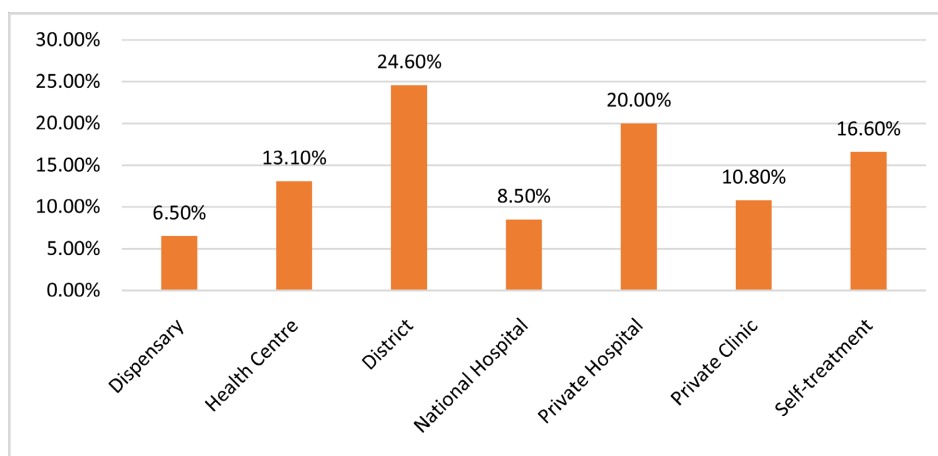
There is a positive and significant relationship between household income and access to healthcare services as indicated in **Appendix 1**. The *phi* value indicates the relationship is positive. As indicated in the **Appendix 2**, there is a positive and significant relationship at p, 0.05 between education level of the household head and access to healthcare services whereby $p = 0.000$. As indicated in **Appendix 3**, there is a positive and significant relationship at $p < 0.05$ between education level of the household head and preference in accessing healthcare facilities whereby $p = 0.000$. Occupation and access to healthcare services were found to be positive and highly significant at $p < 0.05$ whereby $p = 0.000$ as is presented in **Appendix 4**.

The statistical analyses for place of residence and access to healthcare services suggest that the relationship is positive and the value is highly significant whereby $p = 0.000$ as is indicated in **Appendix 5**. The chi-square test used to find the probability to determine if the difference among the samples is significant turned to be positive where $p = 0.003$. There is evidence of an association between marital status and household access to healthcare services as presented

Table 1. Presence of illness in households.

Characteristics	Category	f	%	Total
Presence of illness in last one month	Yes	173	66.5	260
	No	87	33.5	

Source: Field Data.

Source: Field Data.

Figure 2. Place of medication.

in **Appendix 6**. The difference between the observed results (data) and the expected results is smaller than 0.05 ($p = 0.000$). This indicates that there is a positive and significant relationship between household membership to a health insurance cover and access to healthcare services as **Appendix 7** indicates.

The p-values for the test statistic for probability of accessing a provider was found to be smaller than 0.05 ($p = 0.000$) as is indicated in **Appendix 8**. The relationship between health insurance and access to public, private or self-care was found to be positive and significant. Chi square tests of association, indicate that there is an association between health insurance cover and the healthcare outlets preference. In this case $p = 0.000$ which is statistically significant (see **Appendix 9**).

As presented in **Appendix 10**, majority of the referrals were from the private sector to public sector. The overall chi-squared test for the data gives a p-value of 0.000 which is less than the set criterion of 0.05. It is concluded that the two variables are not independent or, put another way, there is a statistically significant difference in the proportions.

5. Discussion

Disparities in access to healthcare are more accentuated by poor economic status (Dorling & Simpson, 1999; Dina & Law, 1998; MOH, 1997; Detels et al., 2004). A first observation based on data analysed is that most people in Eldoret municipality rely on public healthcare outlets for health services. This results are consistent with those previously documented elsewhere in the municipality (Republic of Kenya, 1997) that health facilities specifically the public ones, are being over utilized. Ability to pay would influence household access to healthcare services. It is documented that financial accessibility includes prices of services, ability and willingness to pay, costs related to travel and waiting time and income losses (Baeza & Packard, 2006). Hence, as far as the variables at the household level are concerned, it turns out that income influences access to healthcare services.

Human capital in the form of education level is a key determinant of access to healthcare services. Health behaviour within a household is a process which seems to depend on knowledge. Educational status was a major factor determining access to healthcare. The use of healthcare services linearly increased with education. Postgraduate training is associated with increase in private healthcare. The results of this study are consistent with the findings of Leonard (2000) that education strongly determines choice of service provider. He found that patients at the higher level private and mission facilities tend to be more educated than the population in general. The educated seek out higher-quality services and have greater ability to use healthcare inputs to produce better care (Celik & Hotchikiss, 2000).

Third, analysis of data found that human capital in the form of skills/occupation contributed to a highly significant amount of visits to healthcare services. This is explained in Scambler (2003), that an individual's income is strongly tied to the

nature of his or her work. This agrees with the findings in a study that showed that employed people were more likely to use curative services than the unemployed (Goldstein & Price, 1995).

The finding concerning the choice of provider as a function of social status variables within the community found some significant results. Individuals living in different neighbourhoods, have a different likelihood of visiting different kinds of healthcare facilities. This corroborates findings by Scambler (2003) that health varies with social class. It was found that public healthcare is used mostly by households from the low-income households, while the private sector is predominantly used, by the households from upper income households. These findings are consistent with Iyer (2005) who reports that the facets of social class defined by and including land or house ownership, and upper class as well, are an important predictor of treatment-seeking capacity. Carr (2004) observes that, poor communities typically face multiple health risks related to their location. The poor tend to predominate in remote areas lacking infrastructure, services and trained personnel.

Marital status was as well found to be an independent factor influencing household access to healthcare services. Mekkonen and Mekkonen (2003) report similar findings. The estimation results from the sample imply that health insurance cover can overcome access to healthcare barriers and that an increase in health insurance will positively increase access to healthcare services. Preker and Carrin (2004) and Diop et al. (1995) found that health insurance schemes either compulsory or voluntary increases access to healthcare. Insurance coverage within the household increases both the probability to seek healthcare in general and private healthcare in particular. Health plans reduces out of pocket payments for healthcare therefore increasing access. Further, insurance also promotes equity in use of healthcare services, because the sick benefit from insurance premiums contributed by households who do not get sick (Mwabu et al., 2004). In addition, it facilitates payment for healthcare in advance of illness, thus enabling households to obtain treatment, regardless of their economic status.

Respondents in the survey tended to relate formal referral with quality of healthcare. The fact that formal referral is a determinant of household access to healthcare, as a result of perceived quality of healthcare is in line with HBM (Hochbaum, 1958; Rosenstock, 1966). One of the key descriptors of the model is the perceived benefit of taking action; taking action toward the prevention of disease or toward dealing with an illness is the next step to accept after the individual has accepted that they are susceptible to a disease and recognised it is as serious. During the initial contact of seeking healthcare, the household chooses a facility because the associated benefits are perceived to be higher than those of alternative outlets. However, with formal referral contacts, the quality of healthcare previously received is used as a learning opportunity and the household will only return to the same provider if there is a perceived benefit. Results of the study showed that in general, usage of referral was very low in Eldoret municipality as previously documented elsewhere in the municipality (Nyakaana, 1996)

and beyond (Kiranandana & Apairatr, 1990).

6. Conclusions and Recommendations

The study identified a number of socio-economic factors that influence the use of healthcare services in Eldoret. These include finances, education, place of residence, and marital status. The research findings confirm that health insurance continues to be a determinant of the likelihood of using healthcare as it increases access. The variables selected for review in this study show that there is increased consumption of healthcare by insured households relative to the uninsured.

Study findings confirm that formal referral in Eldoret contributes to access to healthcare for the households. Critical to the question of access to healthcare services is the one of access to better facility outlet and medical specialist. Formal referral has significantly improved accessibility to healthcare for households by increasing their probability of visit to a higher cadre health facility or speciality.

On the theoretical part, the HBM model used was useful in understanding the phenomenon of household access to healthcare services. The participants responded to susceptibility, severity and perceived benefits of action, as posited in the model. Households seek care when they believe they are susceptible to disease. Perceived severity of an illness leads to use of referral system. The third belief influencing action is that the perceived benefits of treatment or intervention will outweigh the costs. This explains the reasons for households' use of healthcare and enrolment in the various health insurance policies.

7. Recommendations

Promoting people's access to healthcare clearly needs a broad and holistic way. It is concluded that various measures and interventions related to household needs would play a significant role in addressing access disadvantage and inequality. The measures include overcoming socio-economic barriers that can slow or block access to healthcare and improving accessibility through the combined effort of healthcare providers, health plans, and healthcare consumers as well as government agencies at the national and local levels.

It is evident that healthcare is expensive and can only be mitigated through pooling of risks that can be provided by an insurance scheme. Therefore, further research is needed to delineate which health insurance design and implementation characteristics allow better access of households to healthcare services. Further, exploration is needed on how health insurance can be made attractive and participative to more households especially from the low social class.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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Appendix 1. Choice of Provider by Household Monthly Income

Health Outlet		Monthly Income						Total
		1 (lowest)	2	3	4	5	6 (top)	
Dispensary	Count	9	4	2	1	1	0	17
	%	9.9	7.5	7.7	5	4.5	0	6.5
Health Centre	Count	24	7	1	0	1	1	34
	%	26.4	13.2	3.8	4	4.5	2.1	13.1
District	Count	28	14	10	5	4	3	64
	%	30.8	26.4	38.5	25	18.2	6.2	24.6
Parastatal Hospital	Count	2	3	5	4	4	4	22
	%	2.2	5.7	19.2	20	18.2	8.3	8.5
Private Hospital	Count	5	9	1	7	6	24	52
	%	5.5	17	3.8	35	27.3	50	20
Private Clinic	Count	3	3	4	2	5	11	28
	%	3.3	5.7	15.4	10	22.7	22.9	10.8
Self-treatment	Count	20	13	3	1	1	2	43
	%	22	24	11.5	5	4.5	10.5	16.6
Total Count		91	53	26	20	22	48	260

χ^2 = 1.244, df = 50, phi = 0.692, *Cramer's V* = 0.309, $P < 0.05$ (p = 0.000). Source: Field Data.

Appendix 2. Choice of Provider by Household Heads' Education Level

Health Outlet		Education Level						Doctoral
		None	Primary	Secondary	Tertiary	Bachelors	Masters	
Dispensary	Count	2	2	6	5	2	0	0
	%	13.3	10	8.1	6.7	3.1	0	0
Health Centre	Count	0	12	17	2	3	0	0
	%	0	60	23	2.7	4.7	0	0
District	Count	5	4	20	23	11	1	0
	%	40	20	27	30.7	17.2	8.3	0
Parastatal Hospital	Count	1	0	7	4	8	2	0
	%	5.6	0	9.5	5.3	12.5	16.7	0
Private Hospital	Count	1	1	9	14	21	5	1
	%	5.6	5	12.2	18.7	32.8	41.7	50

Continued

Private Clinic	Count	1	0	6	8	9	3	1
	%	6.7	0	8.1	10.7	14.1	25	50
Self-treatment	Count	3	1	9	19	10	1	0
	%	28.9	5	12.2	25.3	15.7	8.3	0
Total Count		**13**	**20**	**74**	**75**	**64**	**12**	**2**

$\chi^2 = 1.479$, $df = 800$, $phi = 0.754$, *Cramer's* $V = 0.267$, $p < 0.05$ ($p = 0.000$). Source: Field Data.

Appendix 3. Education and Preference of Healthcare Facility

Education Level		Healthcare Outlet		
		Public	Private	Self-treatment
None	Count	5	3	5
	%	30	27.8	42.2
Primary	Count	17	3	0
	%	85	15	0
Secondary	Count	41	32	1
	%	55.4	43.2	1.4
Tertiary	Count	33	41	1
	%	44	54	1.3
Bachelors	Count	13	51	0
	%	20.3	79.7	0
Masters	Count	1	1	0
	%	50	50	0
Doctoral	Count	1	11	0
	%	8.3	91.7	0
Total Count		**111**	**142**	**7**

$\chi^2 = 1.943$, $df = 24$, $phi = 0.864$, *Cramer's* $V = 0.499$, $p < 0.05$ ($p = 0.000$). Source: Field Data.

Appendix 4. Choice of Provider by Household Heads Occupation

Health Outlet		Occupation					
		Farmer	Professional Worker	Technical Worker	Businessman	Labourer	Home Maker
Dispensary	Count	0	3	0	8	4	2
	%	0	3.1	0	10.8	23.5	11.2

Continued

Health Centre	Count	0	12	8	7	5	2
	%	0	12.5	21.6	9.5	29.4	11.2
District	Count	5	20	7	17	5	10
	%	62.5	20.8	18.9	23	29.4	36.1
		1	12	1	6	1	1
		12.5	12.5	2.7	8.1	5.9	28
Private Hospital	Count	1	29	3	18	0	1
	%	12.5	30.2	8.1	24.3	0	8.4
Private Clinic	Count	0	12	3	9	0	4
	%	0	12.5	8.1	12.2	0	16.7
Self-treatment	Count	1	8	15	9	11.8	13.9
	%	12.5	8.3	40.5	12.3	11.8	13.9
Total Count		8	96	37	74	17	28

$\chi^2 = 2.406$, $df = 80$, $phi = 0.962$, Cramer's $V = 0.340$, $p < 0.05$ ($p = 0.000$). Source: Field Data.

Appendix 5. Choice of Provider by Residence

Healthcare Outlet		Residence			
		Upper Income	Middle Income	Low Income	Total
Dispensary	Count	3	2	12	17
	%	11.8	17.7	70.6	6.5
Health Centre	Count	3	8	23	34
	%	8.8	23.5	67.7	13.1
District	Count	10	31	23	64
	%	15.6	48.5	36	24.6
Parastatal Hospital	Count	6	11	5	22
	%	27.2	50	22.7	8.5
Private Hospital	Count	28	16	8	52
	%	53.8	30.8	15.3	20
Private Clinic	Count	19	4	4	27
	%	67.9	17.9	14.3	10.8
Self-treatment	Count	5	12	27	44
	%	9.8	31.6	58.7	16.5
Total Count		64	168	28	260

$\chi^2 = 2.482$, $df = 80$, $phi = 0.977$, Cramer's $V = 0.345$, $p < 0.05$ ($p = 0.000$). Source: Field Data.

Appendix 6. Choice of Provider by Marital Status

Healthcare Outlet		Marital Status			
		Single	Married	Widowed/Divorced/Separated	Total
Dispensary	Count	5	10	2	17
	%	7.8	6.1	27.4	6.5
Health Centre	Count	8	25	1	34
	%	12.5	13.8	1.3	13.1
District	Count	20	36	8	64
	%	31.2	23.1	9.7	24.6
Parastatal Hospital	Count	5	14	3	22
	%	7.8	13	8.9	8.5
Private Hospital	Count	10	38	4	52
	%	15.6	20.9	10.2	20
Private Clinic	Count	4	21	3	28
	%	6.2	9.7	11	10.8
Self-treatment	Count	12	24	7	43
	%	18.9	13.5	31.6	16.6
Total Count		64	168	28	260

$\chi^2 = 93.818$, $df = 60$, $phi = 0.601$, *Cramer's V* = 0.245, $p < 0.05$ ($p = 0.003$). Source: Field Data.

Appendix 7. Access of Provider According to Health Insurance Beneficiary Status

Healthcare Outlet		None	Social (NHIF)	Private	Social & Private	Total
Dispensary	Count	13	3	1	0	17
	%	12.4	2.6	3.2	0	6.5
Health Centre	Count	17	17	0	0	34
	%	16.2	14.7	0	0	34
District	Count	29	31	2	2	64
	%	27.6	26.7	6.5	25	24.6
Parastatal Hospital	Count	3	16	2	1	22
	%	2.9	13.8	6.5	12.5	8.5
Private Hospital	Count	6	28	15	3	52
	%	5.7	24.1	48.4	37.5	20
Private Clinic	Count	7	11	9	1	28
	%	6.7	9.5	29	12.5	10.8
Self-treatment	Count	30	10	2	1	43
	%	28.8	8.6	6.5	12.5	16.6
Total Count		105	116	31	8	260

$\chi^2 = 89.750$, $df = 30$, $phi = 0.588$, *Cramer's V* = 0.339, $p < 0.05$ ($p = 0.000$). Source: Field Data.

Appendix 8. Choosing a Provider as a Function of Health Insurance Status

Health Provider		Health Insurance			
		Social	Private	Social & Private	None
Public	Count	51	2	2	55
	%	44	6.5	25	52.4
Private	Count	64	29	6	43
	%	55.2	93.5	75	41
Self-treatment	Count	1	0	0	5
	%	0.9	0	0	6.7
Total Count		116	31	8	105

χ^2 = 33.032, df = 9, phi = 0.356, *Cramer's V* = 0.206, $p < 0.05$ (p = 0.000). Source: Field Data.

Appendix 9. Healthcare Facility Preference Based on Health Insurance Status

Health Provider		Health Insurance			
		Social	Private	Social & Private	None
Public	Count	51	2	2	55
	%	44	6.5	25	52.4
Private	Count	64	29	6	43
	%	55.2	93.5	75	41
Self-treatment	Count	1	0	0	5
	%	0.9	0	0	6.7
Total Count		116	31	8	105

χ^2 = 33.032, df = 9, phi = 0.356, *Cramer's V* = 0.206, $p < 0.05$ (p = 0.000). Source: Field Data.

Appendix 10. Healthcare Facility Referred to

Category of Care	Frequency	%
Private - Public	37	53.6
Private - Private	12	17.4
Public - Private	2	2.9
Public - Public	18	26
Total Count	39	100

χ^2 = 1.500, df = 24, phi = 1.475, *Cramer's V* = 0.737, $p < 0.05$ (p = 0.000). Source: Field Data.